Commentor No. 46 (cont'd): Richard F. Till

milestones. The TPA agencies completed negotiations on several Hanford cleanup projects, including the establishment of 29 additional and/or accelerated groundwater and Columbia River protection milestones and target dates.

Commentor No. 47: David Moen

U.S. DEPARTMENT OF ENERGY

Comment Form
Formulario para comentarios

Thank you for your input
Gracias por su participación

PLEASE PRINT / FAVOR DE ESCRIBIR CLARAMENTE

Date/Fecha: Feb. 10, 2010

1. What comments do you have on the *Draft Tank Closure and Waste Management Environmental Impact Statement for the Hanford Site, Richland, Washington (TC & WM EIS)*?
¿Que comentarios tiene usted sobre el *Borrador de la Declaración Sobre el Impacto Ambiental del Cierre de Contenedores y la Disposición de Desechos del Establecimiento de Hanford, Richland, Washington (TC & WM EIS)*?

I consider radioactive waste the biggest environmental terrorist threat to our homeland security we have ever faced. In light of this I expect a permanent sollution to cleaning up Hanford quickly + 100% thouroughly. This means I expect: *47-1*

- Recind the prefered alternative to turn Hanford into a national radioactive waste dump; Bringing more nuclear waste to Hanford is not acceptable under any conditions! *47-2*
- clean up all of the waste that currently exists!!! (on site) It is legally, morally, + ethically reprehensible to do anything less. *47-3*
- Honor the state + federal trust responsibilities to the tribal nations by consulting with them + doing what they recomend is the responsible Sollution in their homelands. *47-4*
- clean up the ground water + seal the "leaker" tanks, no matter what. *47-3 cont'd*

*** CONTINUE ON BACK FOR MORE SPACE ***
*** CONTINUAR AL DORSO PARA MÁS ESPACIO ***

Name/Nombre: Mr. David Moen

Address/Dirección: 16751 S. McCubbin Rd.

City, State, Zip Code/Ciudad, Estado, Zona Postal: Oregon City, OR 97045

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TC & WM EIS, P.O. Box 1178, Richland, WA 99352
Toll-free Telephone: 1-888-829-6347 • Toll-free Fax: 1-888-785-2865
E-mail: TC&WMEIS@saic.com

47-1 Comment noted.

47-2 Regarding the commentor's concern about the transport of LLW and MLLW from other DOE sites to Hanford for disposal, DOE will be deferring the decision on sending LLW or MLLW from other DOE sites to Hanford for disposal (with some limited specific exceptions), at least until the WTP is operational, subject to appropriate NEPA review. For a more comprehensive discussion on the transport and disposal of offsite waste, see Section 2.1 of this CRD.

47-3 Regarding the status of groundwater contamination and remediation at Hanford, groundwater remediation activities, as required under RCRA, CERCLA, and/or the TPA, are in various stages of assessment, risk-based end-state development, corrective action, and/or active remediation. For a more comprehensive discussion of remediation at Hanford, see Section 2.3 of this CRD.

47-4 DOE actively engages in government-to-government consultations with tribes in the vicinity of Hanford. These consultations offer the opportunity for tribes to engage in meaningful dialogue in advance of DOE decisionmaking.

Commentor No. 48: Anonymous

U.S. DEPARTMENT OF ENERGY

Comment Form
Formulario para comentarios

Thank you for your input
Gracias por su participación

PLEASE PRINT / FAVOR DE ESCRIBIR CLARAMENTE

Date/Fecha: 2/10/10

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Anything to decrease leakage into the Columbia River → keep working hard to minimize waste → I wish I knew the answers → your work is so astronomical to the 7th generation. The responsibility is so huge. Actions = everything → What can I do to help? We are all so sad. This is such a condition to tackle. Keep the faith & pray – I'm praying for your work & straight mind in this problem. May God heal this tragedy. *48-1*

Moving more waste to Hanford doesn't make sense. *48-2*

Autism is on the rise. 10 years ago 1 out of 10,000 kids had autism – now 1 out of 150 have autism. I believe immunizations (some) & toxic waste are a big reason for this increase.

Keep the faith!

*** CONTINUE ON BACK FOR MORE SPACE ***
*** CONTINUAR AL DORSO PARA MÁS ESPACIO ***

Name/Nombre: _____

Address/Dirección: _____

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E-mail: TC&WMEIS@saic.com

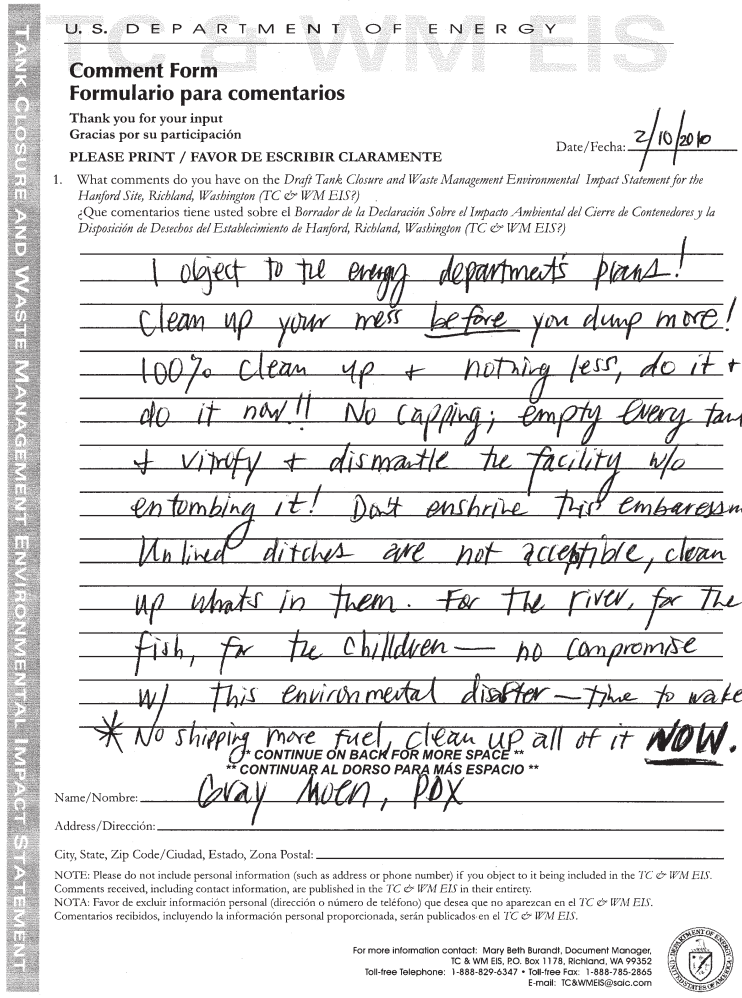
48-1 Since 2004, DOE has buried all LLW in lined trenches. DOE continues to have strict limits for the amount of waste Hanford can accept, and ensures that disposal activities are protective of the environment and meet regulatory requirements. See Chapter 1, Section 1.4, for more on DOE's commitment to using lined trenches.

Regarding the status of groundwater contamination and remediation at Hanford, groundwater remediation activities, as required under RCRA, CERCLA, and/or the TPA, are in various stages of assessment, risk-based end-state development, corrective action, and/or active remediation. For a more comprehensive discussion of remediation at Hanford, see Section 2.3 of this CRD.

At all DOE sites, including Hanford, the Site Pollution Prevention Program is a comprehensive, continual effort to reduce the quantity and toxicity of hazardous, radioactive, mixed, and sanitary wastes; and prevent or minimize pollutant releases to all environmental media from all operations and site cleanup activities. The Site Pollution Prevention Program reflects Federal and DOE policies to reduce, reuse, and/or recycle wastes as asserted by the Pollution Prevention Act of 1990. See Chapter 3, Sections 3.2.12.2 (Hanford) and 3.3.12.2 (INL), and Chapter 4, Section 4.1, for more details of waste minimization activities.

48-2 Regarding the commentor's concern about the transport of LLW and MLLW from other DOE sites to Hanford for disposal, DOE will be deferring the decision on sending LLW or MLLW from other DOE sites to Hanford for disposal (with some limited specific exceptions), at least until the WTP is operational, subject to appropriate NEPA review. For a more comprehensive discussion on the transport and disposal of offsite waste, see Section 2.1 of this CRD.

Commentor No. 49: Gray Moen



TANK CLOSURE AND WASTE MANAGEMENT ENVIRONMENTAL IMPACT STATEMENT

U.S. DEPARTMENT OF ENERGY

TC & WM EIS

Comment Form
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I object to the energy department's plans!
Clean up your mess before you dump more! 49-1

100% clean up + nothing less, do it +
do it now!!! No capping; empty every tank
+ vitrify + dismantle the facility w/o
entombing it! Don't enshrine this embarassment! 49-2
Unlined ditches are not acceptible, clean
up whats in them. For the river, for the
fish, for the chilldren — no compromise
w/ this environmental disaster — time to wake up!
* No shipping more fuel, clean up all of it NOW. 49-3

** CONTINUE ON BACK FOR MORE SPACE **
** CONTINUAR AL DORSO PARA MÁS ESPACIO **

Name/Nombre: Gray Moen, POX

Address/Dirección:

City, State, Zip Code/Ciudad, Estado, Zona Postal:

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E-mail: TC&WMEIS@saic.com

49-1 DOE is implementing an extensive, ongoing cleanup program at Hanford, as required under RCRA, CERCLA, and/or the TPA, a legal agreement between DOE, Ecology, and EPA. The TPA identifies cleanup actions and schedules, called milestones. The TPA agencies completed negotiations on several Hanford cleanup projects, including the establishment of 29 additional and/or accelerated groundwater and Columbia River protection milestones and target dates. Although such cleanup activities are not within the scope of this EIS, DOE included remediation activities in the present cumulative impacts analysis. These activities encompass existing contamination from past tank leaks and past waste management practices. DOE also recognizes stakeholders' concerns about cleaning up the site before bringing more waste from other DOE sites for disposal. To this end, in a *Federal Register* notice published on December 18, 2009 (74 FR 67189), DOE modified its Preferred Alternative for waste management and extended the duration of the moratorium until the WTP is operational. DOE also included GTCC waste as part of that moratorium. DOE has not changed its Preferred Alternative in this final EIS concerning this extended moratorium. DOE's inclusion of the moratorium in its ROD following issuance of this final EIS would result in its enforceability.

49-2 The clean closure alternatives considered for the SST system are represented by Tank Closure Alternatives 6A and 6B, Base and Option Cases. For both Tank Closure Alternatives 6A and 6B, Base Cases, the assumption is that the SST system would be cleaned to levels that would allow unrestricted use, which would involve removal of the tanks, ancillary equipment, and soils beneath the tanks (contaminated as a result of past leaks) down to the water table. The two Option Cases represent this type of clean closure along with removal of soils beneath the tank farms (contaminated as a result of infiltration from the contiguous cribs and trenches [ditches]). The analysis shows that removal of the contaminants from the vadose zone does not capture those contaminants that may have already reached the groundwater table due to past practices (i.e., past leaks and contiguous cribs and trenches [ditches]).

Since 2004, DOE has buried all LLW in lined trenches (see Appendix E, Section E.3.3, for the evolution of past disposal practices). DOE continues to have strict limits for the amount of waste Hanford can accept and ensures that disposal activities are protective of the environment and meet regulatory requirements. Previous use of unlined trenches for disposal was a big concern to stakeholders and Washington and Oregon States; DOE heard and addressed those concerns and is using lined trenches.

Commentor No. 49 (cont'd): Gray Moen

The remediation of burial grounds is not within the scope of this EIS. However, Appendix S includes DOE's inventory estimates for the burial grounds and Appendix U provides supporting information on the long-term cumulative impact analyses that includes the burial ground inventories.

49-3 DOE assumes that the commentor is referring to SNF when referring to the shipment of "fuel" to Hanford.

Regarding the safe disposal of waste generated from nuclear energy production, the current Administration has established a Blue Ribbon Commission on America's Nuclear Future that has issued a report and recommendations for a path forward for managing the country's HLW. DOE's decisions regarding management of Hanford waste will be consistent with Administration policies. For a more comprehensive discussion of this topic, see Section 2.10 of this CRD.

Commentor No. 50: Susan O. Moen

U. S. DEPARTMENT OF ENERGY

Comment Form
Formulario para comentarios

Thank you for your input
Gracias por su participación

Date/Fecha: 2-10-2010

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- Hanford must be cleaned up entirely, soil, ground water and all.
- No new nuclear waste should be allowed to come to Hanford.
- "Decommission" not "Entombment."
- This is expensive, but it is the true cost of nuclear production + should be entered into the equasion from the begining... lets pay what it takes to do the job right: 99.9% clean up.

*** CONTINUE ON BACK FOR MORE SPACE ***
*** CONTINUAR AL DORSO PARA MÁS ESPACIO ***

Name/Nombre: Susan O. Moen, Portland

Address/Dirección: [redacted]

City, State, Zip Code/Ciudad, Estado, Zona Postal:

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E-mail: TC&WMEIS@saic.com

50-1
50-2
50-3
50-1 cont'd

50-1 The impacts of different levels of tank waste retrieval and of different types of SST system closure are addressed in the *TC & WM EIS* analyses. These include Tank Closure Alternatives 4, 6A, and 6B, which evaluate 99.9 percent retrieval of the tank waste and clean closure of all or part of the SST system. This closure includes the tank system, along with the vadose zone as impacted by the tank farms (i.e., past leaks). Decisions made by DOE on the proposed actions will be based on a number of factors, including health and safety, environmental, economic, and technical considerations; agency statutory missions; and national policy considerations. The decisions on the selected course of action and supporting rationale will be documented in a ROD issued no sooner than 30 days after the EPA Notice of Availability for this *Final TC & WM EIS* is published in the *Federal Register*.

However, as discussed in the Summary, Section S.1.3.2, and Chapter 1, Section 1.4.2, of this *TC & WM EIS*, DOE will not make decisions on groundwater remediation, including the remediation of groundwater contamination resulting from non-tank-farm areas in the 200 Areas, because that is being addressed under the CERCLA (42 U.S.C. 9601 et seq.) process. DOE is implementing an extensive, ongoing cleanup program at Hanford, as required under RCRA, CERCLA, and/or the TPA, a legal agreement between DOE, Ecology, and EPA. The TPA identifies cleanup actions and schedules, called milestones. The TPA agencies completed negotiations on several Hanford cleanup projects, including the establishment of 29 additional and/or accelerated groundwater and Columbia River protection milestones and target dates.

50-2 Regarding the commentor's concern about the transport of LLW and MLLW from other DOE sites to Hanford for disposal, DOE will be deferring the decision on sending LLW or MLLW from other DOE sites to Hanford for disposal (with some limited specific exceptions), at least until the WTP is operational, subject to appropriate NEPA review. For a more comprehensive discussion on the transport and disposal of offsite waste, see Section 2.1 of this CRD.

50-3 Three alternatives for decommissioning FFTF are presented in this *TC & WM EIS*. These alternatives are No Action, Entombment, and Removal. DOE has selected FFTF Decommissioning Alternative 2: Entombment, as its Preferred Alternative. This alternative would remove all above-grade structures, including the reactor building. Below-grade structures, the reactor vessel, piping, and other components would remain in place and be filled with grout to immobilize the remaining and hazardous constituents. Waste generated from these activities would be disposed of in an IDF, and a modified RCRA

Commentor No. 50 (cont'd): Susan O. Moen

Subtitle C barrier would be constructed over the filled area. The RH-SCs would be processed at INL, but bulk sodium inventories would be processed at Hanford (see Chapter 2, Section 2.12.2).

Commentor No. 51: Allen Evans

U.S. DEPARTMENT OF ENERGY

Comment Form
Formulario para comentarios

Thank you for your input
Gracias por su participación

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Date/Fecha: 2/10/10

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Hanford was selected as a location for production of radioactive materials for reasons that overwhelmed concerns ~~for~~ regarding the geology and groundwater characteristics of the area. Wartime hysteria required a quick decision be made. Hanford was remote - facilitating security and secrecy. There was a low population density, abundant water from the Columbia River, and abundant electricity from newly completed dams on that river. Waste management was a secondary concern. The result is the set of problems with contamination we are dealing with now. These demonstrate that Hanford is an inappropriate place for the storage of nuclear waste, especially long term. No more offsite waste should be shipped there.

The best solution would be to stop production of nuclear materials to begin with. Thank you.

51-1

** CONTINUE ON BACK FOR MORE SPACE **
** CONTINUAR AL DORSO PARA MÁS ESPACIO **

Name/Nombre: Allen Evans

Address/Dirección: 3926 S.E. Nehalem St

City, State, Zip Code/Ciudad, Estado, Zona Postal: Portland, OR 97202

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TANK CLOSURE AND WASTE MANAGEMENT ENVIRONMENTAL IMPACT STATEMENT

51-1 Regarding the commentor's concern about the transport of LLW and MLLW from other DOE sites to Hanford for disposal, DOE will be deferring the decision on sending LLW or MLLW from other DOE sites to Hanford for disposal (with some limited specific exceptions), at least until the WTP is operational, subject to appropriate NEPA review. For a more comprehensive discussion on the transport and disposal of offsite waste, see Section 2.1 of this CRD.

The impacts of the offsite waste in terms of radiological risk are presented in the Summary, Section S.5.5.3, and Chapter 2, Section 2.10, Key Environmental Findings. These sections discuss the radiological risk differences between including and not including offsite waste disposal at IDF-East.

The *TC & WM EIS* analysis shows that receipt of offsite waste streams that contain specific amounts of certain isotopes, specifically, iodine-129 and technetium-99, could cause an adverse impact on the environment. Therefore, one means of mitigating this impact would be for DOE to limit disposal of offsite waste streams at Hanford. Other mitigation measures, such as recycling secondary-waste streams into the primary-waste-stream feeds within the WTP to increase iodine-129 capture in ILAW and bulk vitrification glass, are discussed in Chapter 7, Section 7.5, of this final EIS.

The production of nuclear materials is not within the scope of this *TC & WM EIS*. This EIS addresses proposed actions to retrieve and treat the Hanford tank waste; close the Hanford SST system; store and/or dispose of the waste generated from these tank waste activities; decommission FFTF; and expand or upgrade waste management capabilities to support ongoing and planned waste management activities for on- and offsite waste to facilitate cleanup at Hanford and other DOE sites.

Commentor No. 52: Lynn Ford

U.S. DEPARTMENT OF ENERGY

Comment Form
Formulario para comentarios

Thank you for your input
Gracias por su participación

PLEASE PRINT / FAVOR DE ESCRIBIR CLARAMENTE

Date/Fecha: 2/10/200

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1. DO NOT ADD ANY MORE WASTE OF ANY KIND TO HANFORD. USE STIMULUS MONEY TO TREAT IT ALL "IN SITU." THAT WOULD GET SUPPORT FROM MANY CONGRESSIONAL REPS. — 52-1

2. START UP L.A.W. VITRIFICATION PART OF WTP by 2019. START FUNDING 2ND L.A.W. IN 2012 TO have it start operations by 2022 — 52-2

3. Follow WASH. State standard for FFTF waste removal + site restoration — 52-3

4. Perform true "clean closure" for single shell tanks Follow WASH. State Law. Remove 99.9% of tank wastes — 52-4

Get more funding for clean up from stimulus money; provide employment doing something useful. — 52-5

Also, give Iranian officials a tour. Maybe they won't like nukes after that — 52-2 cont'd

** CONTINUE ON BACK FOR MORE SPACE **
** CONTINUAR AL DORSO PARA MÁS ESPACIO **

Name/Nombre: LYNN FORD

Address/Dirección: 410 N. Blandena St

City, State, Zip Code/Ciudad, Estado, Zona Postal: Portland, OR 97217

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52-2 The use of stimulus funds to treat waste and clean up Hanford is beyond the scope of this *TC & WM EIS*.

52-3 This EIS analyzed supplemental LAW treatment capability by building new treatment facilities that are either part of (expanded LAW capacity) or separate (bulk vitrification, steam reforming, or cast stone) from the WTP. As discussed in Chapter 2, Section 2.12, DOE does not have a preferred alternative regarding supplemental treatment for LAW. DOE believes it is beneficial to study further the potential cost, safety, and environmental performance of supplemental treatment technologies. DOE is committed to meeting its obligations under the TPA regarding supplemental treatment for LAW.

52-4 DOE must comply with certain legal requirements to undertake specific activities that are part of the proposed actions and alternatives; these requirements are identified throughout this EIS. For example, Chapter 1, Section 1.2.1, discusses Hanford regulatory compliance requirements; Section 1.2.7 discusses the WAC regulations DOE must meet for the proposed closure of the SSTs. Section 1.9, which describes the alternatives evaluated in this EIS, refers to the RCRA, WAC, and DOE order requirements that must be met for DOE to implement Tank Closure and FFTF Decommissioning alternatives. The very nature of "environmental impacts analysis" requires DOE to analyze and describe in this EIS how proposed processes and technologies would operate; what results they are expected to achieve; what end products or byproducts might result; and how these measure up against the legal requirements that apply. Statutory, regulatory, Executive order, and DOE requirements are discussed in the context of each chapter and are listed in the references at the end of each chapter.

52-5 Comment noted.

Commentor No. 53: Lang Davison

U. S. DEPARTMENT OF ENERGY

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we want and demand:

(1) Closure of 99.9 % of the waste already at Hanford
Clean
- Empty all ~~tanks~~ tanks, all 53 million gallons
Immediate
- Clean the soil beneath tanks
- Remove the tanks

(2) No new GTCC waste into Hanford. No more Radioactive waste from other sites into Hanford, Not a national waste dump. Drop the proposals

(3) Clean up what's already leaking into the groundwater through the soil — the millions of gallons of nuclear waste, [and/OR failing to clean up what's already there]
Adding more waste is legally, morally, and ethically unacceptable!

53-1

53-2

53-3

** CONTINUE ON BACK FOR MORE SPACE **
** CONTINUAR AL DORSO PARA MÁS ESPACIO **

Name/Nombre: Lang Davison

Address/Dirección: 1739 SE Lexington St.

City, State, Zip Code/Ciudad, Estado, Zona Postal: Portland, OR 97202

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TANK CLOSURE AND WASTE MANAGEMENT ENVIRONMENTAL IMPACT STATEMENT

53-1 The impacts of different levels of tank waste retrieval and of different types of SST system closure are addressed in the *TC & WM EIS* analyses. These include Tank Closure Alternatives 4, 6A, and 6B, which evaluate 99.9 percent retrieval of the tank waste and clean closure of all or part of the SST system. Decisions made by DOE on the proposed actions will be based on a number of factors, including health and safety, environmental, economic, and technical considerations; agency statutory missions; and national policy considerations. The decisions on the selected course of action and supporting rationale will be documented in a ROD issued no sooner than 30 days after the EPA Notice of Availability for this *Final TC & WM EIS* is published in the *Federal Register*. DOE is implementing an extensive, ongoing cleanup program at Hanford as required under RCRA, CERCLA, and/or the TPA, a legal agreement between DOE, Ecology, and EPA. The TPA identifies cleanup actions and schedules, called milestones. The TPA agencies completed negotiations on several Hanford cleanup projects, including the establishment of 29 additional and/or accelerated groundwater and Columbia River protection milestones and target dates.

53-2 Regarding the commentor's concern about the transport of LLW and MLLW from other DOE sites to Hanford for disposal, DOE will be deferring the decision on sending LLW or MLLW from other DOE sites to Hanford for disposal (with some limited specific exceptions), at least until the WTP is operational, subject to appropriate NEPA review. For a more comprehensive discussion on the transport and disposal of offsite waste, see Section 2.1 of this CRD.

Regarding the commentor's concern about the inclusion of GTCC LLW in this *TC & WM EIS*, DOE has included information from the *Draft GTCC EIS* in the *Final TC & WM EIS* cumulative impacts analysis. For a more comprehensive discussion on GTCC LLW, see Section 2.12 of this CRD.

53-3 As analyzed in this *TC & WM EIS*, 67 of the 149 SSTs at Hanford are known or suspected to have leaked liquid waste to the environment between the 1950s and the present, some of which has reached the groundwater. Estimates of the total leak loss range from less than 2.8 million to as much as 3.97 million liters (750,000 to 1,050,000 gallons). DOE recognizes that groundwater contamination from past leaks is a concern at Hanford and its potential impact on communities downriver from Hanford. One of the purposes of this *TC & WM EIS* is to analyze potential impacts of DOE's proposed actions to retrieve waste from the buried tanks, treat and dispose of this waste, and close the SST farms. This analysis is also intended to aid DOE in making decisions regarding cleanup of the past leaks.

Commentor No. 53 (cont'd): Lang Davison

See response to comment 53-2 for a discussion on the transport and disposal of offsite waste.

Commentor No. 54: Martin Mijal

U. S. DEPARTMENT OF ENERGY

TC & WM EIS

Comment Form
Formulario para comentarios

Thank you for your input
Gracias por su participación

PLEASE PRINT / FAVOR DE ESCRIBIR CLARAMENTE

Date/Fecha: 2.10.10

1. What comments do you have on the *Draft Tank Closure and Waste Management Environmental Impact Statement for the Hanford Site, Richland, Washington (TC & WM EIS)*?
¿Que comentarios tiene usted sobre el *Borrador de la Declaración Sobre el Impacto Ambiental del Cierre de Contenedores y la Disposición de Desechos del Establecimiento de Hanford, Richland, Washington (TC & WM EIS)*?

Nuclear waste affects our descendents & other life-forms for 100,000 plus years. This is poison. IT KILLS. Cancer is an ugly way to die. This is not a trivial decision. 54-1

This problem should never have occurred. Genius scientists needed use of intelligence & a huge budget to make this poison for weapons of mass destruction. Lack of long-term planning now gives us extremely serious hazards to current workers to de-contaminate this & also the 1,000,000 gallons leaking to our Glorious Columbia River. 54-2 54-3

The theory of Capitalism is that if incompetence happens — the Boss is FIRED. D.O.E. is a FAILURE! You all should be fired!

Clean up the poison from our weapons of mass destruction. I want: 1) USDOE must remove 99.9% of tank wastes. 54-4

2) USDOE must remove tanks. Do "clean closure." Remediate the soil & clean it. Leaving the bottom 1% of poison is the leaviest, hardest to remove AND the MOST POISONOUS! This is essential to remove 99.9 % ! 54-5

3) Remove FFTF & restore the site. Treat the FFTF waste at Hanford. 54-6

4) START up the LAW VITRIFICATION portion of WTP PRIOR to 2019. Fund & Complete a second LAW facility in 2012 →

Continued →

** CONTINUE ON BACK FOR MORE SPACE **
** CONTINUAR AL DORSO PARA MÁS ESPACIO **

Name/Nombre: MARTIN MIJAL

Address/Dirección: 4527 NE SUMNER ST.

City, State, Zip Code/Ciudad, Estado, Zona Postal: Pdx OR 97218

NOTE: Please do not include personal information (such as address or phone number) if you object to it being included in the *TC & WM EIS*. Comments received, including contact information, are published in the *TC & WM EIS* in their entirety.
NOTA: Favor de excluir información personal (dirección o número de teléfono) que desea que no aparezcan en el *TC & WM EIS*. Comentarios recibidos, incluyendo la información personal proporcionada, serán publicados en el *TC & WM EIS*.

For more information contact: Mary Beth Burandt, Document Manager,
TC & WM EIS, P.O. Box 1178, Richland, WA 99352
Toll-free Telephone: 1-888-829-6347 • Toll-free Fax: 1-888-785-2865
E-mail: TC&WMEIS@saic.com

54-1 This EIS addresses the environmental impacts of retrieval, treatment, and disposal of tank waste and final closure of the SST system. It also evaluates the impacts of FFTF decommissioning, including management of waste generated by the decommissioning process. Finally, this *TC & WM EIS* evaluates the potential environmental impacts of ongoing solid-waste management operations at Hanford, as well as the proposed disposal of Hanford LLW and MLLW and a limited volume of offsite LLW and MLLW.

54-2 The actions proposed in this *TC & WM EIS* include the retrieval and treatment of highly radioactive waste from defense plutonium production that was placed into underground SSTs for storage. The pressing need for a strong national defense capability during World War II led to the development of Hanford to produce plutonium for weapons production. In the ensuing decades, Hanford continued to be part of DOE's Defense Complex as well as being engaged in efforts to develop nuclear power for peaceful purposes. During these early decades, the nation did not have the environmental awareness, laws, and regulations that exist today. Nevertheless, it was recognized that HLW from plutonium production should be managed as safely as possible, and DOE's predecessor agencies constructed large facilities, including the underground tanks, to manage the waste produced as a result of Hanford's national defense mission. In implementing its programs, including the cleanup activities evaluated in this EIS, ensuring worker safety is a matter of DOE policy and primary concern. DOE works and will continue work to minimize risks to workers through site procedures and job control plans aimed at maintaining radiation doses ALARA. Worker doses will be controlled by techniques such as planning work to reduce time of exposure, increasing the number of workers, using shielding, and employing remote operations.

54-3 As analyzed in this *TC & WM EIS*, 67 of the 149 SSTs at Hanford are known or suspected to have leaked liquid waste to the environment between the 1950s and the present, some of which has reached the groundwater. Estimates of the total leak loss range from less than 2.8 million to as much as 3.97 million liters (750,000 to 1,050,000 gallons). DOE recognizes that groundwater contamination from past leaks is a concern at Hanford and its potential impact on communities downriver from Hanford. One of the purposes of this *TC & WM EIS* is to analyze potential impacts of DOE's proposed actions to retrieve waste from the buried tanks, treat and dispose of this waste, and close the SST farms. This analysis is also intended to aid DOE in making decisions regarding cleanup of the past leaks.

54-4 The impacts of different levels of tank waste retrieval and of different types of SST system closure are addressed in the *TC & WM EIS* analyses. These include

Commentor No. 54 (cont'd): Martin Mijal

So it will operate by 2022.

@ NO NO more waste - poison - cancer - causes added to Hanford.

President Bush signed an executive order putting DOE in charge of the cleanup. President OBAMA could review the failure of ~~DOE~~ & sign an executive order that EPA is in charge MAYbe then some energy, funding, genius, passion, & creativity could be used to CLEAN UP HANFORD — 99.99% !

54-6 cont'd

54-7

54-8

54-5 Comment noted.

54-6 As discussed in the *TC & WM EIS* Summary, Chapter 1, and Chapter 2, this EIS analyzes additional waste treatment capability that includes expanding the vitrification process capability currently being constructed in the WTP or supplementing the WTP's capability with supplemental treatment technologies. Thus, decisions to be made by DOE regarding whether to treat all waste in the WTP, as is or expanded, or to supplement its capacity by adding new treatment capability depend on demonstrating the feasibility of supplemental treatment technologies, including supplemental treatment waste-form performance (durability) for long-term groundwater protection.

Appendix E, Section E.1.3.3.1, discusses the DOE Technology Readiness Assessment that included Business Case No. 7 (LAW First and Bulk Vitrification with Tank Farm Pretreatment), i.e., early startup of the LAW treatment process. However, at the time of the *Draft TC & WM EIS* preparation, DOE had not made a decision on whether to support implementation of this business case. Since then, DOE has commissioned an external technical review of the system planning for alternative supplemental treatment of LAW at Hanford (Kosson et al. 2008). The report (Kosson et al. 2008) from this review concluded that, although the current schedule for completion of the WTP LAW Vitrification Facility and supporting facilities could support early treatment of LAW in 2014, such early startup would require an interim pretreatment capability and the means for disposition of secondary waste. Since 2008, DOE has been evaluating the transition of the WTP from construction to commissioning. Information on this strategy is provided in Appendix E, Section E.1.3.3.2, of this *Final TC & WM EIS*. The *2020 Vision* (WRPS and BNI 2011) evaluates some of the elements identified in earlier DOE reports, but focuses on commissioning of the WTP project and activities essential to starting up the LAW Vitrification Facility, the Analytical Laboratory, and the BOF, as well as the Pretreatment Facility and

Tank Closure Alternatives 6A and 6B, which evaluate 99.9 percent retrieval of the tank waste and clean closure of all of the SST system. Decisions made by DOE on the proposed actions will be based on a number of factors, including health and safety, environmental, economic, and technical considerations; agency statutory missions; and national policy considerations. The decisions on the selected course of action and supporting rationale will be documented in a ROD issued no sooner than 30 days after the EPA Notice of Availability for this *Final TC & WM EIS* is published in the *Federal Register*.

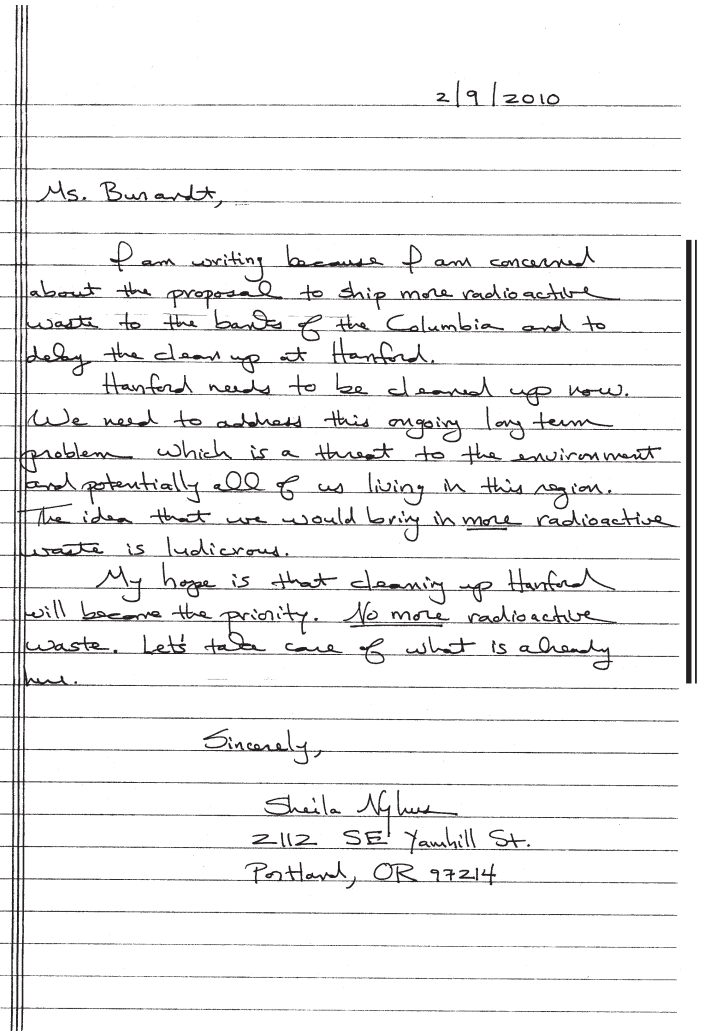
Commentor No. 54 (cont'd): Martin Mijal

the HLW Vitrification Facility. For more information regarding the *2020 Vision*, please see Appendix E, Section E.1.3.3.2.

54-7 Regarding the commentor's concern about the transport of LLW and MLLW from other DOE sites to Hanford for disposal, DOE will be deferring the decision on sending LLW or MLLW from other DOE sites to Hanford for disposal (with some limited specific exceptions), at least until the WTP is operational, subject to appropriate NEPA review. For a more comprehensive discussion on the transport and disposal of offsite waste, see Section 2.1 of this CRD.

54-8 In general, the scope of this *TC & WM EIS* does not include groundwater remediation activity as part of the proposed actions evaluated. However, DOE is implementing an extensive, ongoing cleanup program at Hanford, as required under RCRA, CERCLA, and/or the TPA, a legal agreement between DOE, Ecology, and EPA. The TPA identifies cleanup actions and schedules, called milestones. The TPA agencies completed negotiations on several Hanford cleanup projects, including the establishment of 29 additional and/or accelerated groundwater and Columbia River protection milestones and target dates.

Commentor No. 55: Sheila Nyhus



2/9/2010

Ms. Burandt,

I am writing because I am concerned about the proposal to ship more radioactive waste to the banks of the Columbia and to delay the clean up at Hanford.

Hanford needs to be cleaned up now. We need to address this ongoing long term problem which is a threat to the environment and potentially all of us living in this region. The idea that we would bring in more radioactive waste is ludicrous.

My hope is that cleaning up Hanford will become the priority. No more radioactive waste. Let's take care of what is already here.

Sincerely,

Sheila Nyhus
2112 SE Yamhill St.
Portland, OR 97214

55-1

55-1 Regarding the commentor's concern about the transport of LLW and MLLW from other DOE sites to Hanford for disposal, DOE will be deferring the decision on sending LLW or MLLW from other DOE sites to Hanford for disposal (with some limited specific exceptions), at least until the WTP is operational, subject to appropriate NEPA review. For a more comprehensive discussion on the transport and disposal of offsite waste, see Section 2.1 of this CRD.

In general, the scope of this *TC & WM EIS* does not include groundwater remediation activity as part of the proposed actions evaluated. However, DOE is implementing an extensive, ongoing cleanup program at Hanford, as required under RCRA, CERCLA, and/or the TPA, a legal agreement between DOE, Ecology, and EPA. The TPA identifies cleanup actions and schedules, called milestones. The TPA agencies completed negotiations on several Hanford cleanup projects, including the establishment of 29 additional and/or accelerated groundwater and Columbia River protection milestones and target dates.

Commentor No. 56: Bob Severson, Mayor, City of Hermiston, Oregon

Administrative Offices
180 N.E. 2nd Street
Hermiston, OR 97838-1860
Phone (541) 567-5521 • Fax (541) 567-5530
E-mail: bseverson@hermiston.or.us

Mary Beth Burandt
DOE Draft TC&WM EIS Comments
Office of River Protection
Richland, WA 99685

Dear Ms. Burandt:

The City of Hermiston is extremely concerned with potential plans by the US Department of Energy to allow the Hanford Nuclear Reservation near Richland, Washington as a permanent nuclear waste disposal site for waste from across the United States.

As a community that lies down stream from the Hanford site, as a community that relies on water withdrawals from the Columbia River system for domestic use in our municipal water system, as a region that is driven economically by agricultural production of irrigated food crops with water drawn from the Columbia River and with Oregon's plan to pump Columbia River water during the winter months into local aquifiers we are strongly opposed to plans for storage of off site waste to this site and the further threat of groundwater contamination.

Because the EIS shows "persistent contamination in Hanford's groundwater for thousands of years"and the likelihood that much of this contaminated groundwater would likely reach the Columbia River, the long term impacts on the groundwater will be significant and we ask that this plan be stopped.

Our citizens have lived under the shadow of this facility for many years and just as they are beginning to hope that significant advances may be made in mitigating this contamination now they want to store more waste and threaten further environmental liabilities to an already endangered site. This is not an acceptable solution or alternative. Our citizens expected clean-up, not new hazardous disposals.

Please oppose any plan to use Hanford as a national depository for nuclear waste.

Sincerely,

Bob Severson
Mayor

cc: Hermiston City Council
Ed Brookshier, City Manager.

H:\Mayor letter USDOE Hanford

RECEIVED
FEB 09 2010
DOE-ORP/ORPCC

56-1

56-1 Regarding the status of groundwater contamination and remediation at Hanford, groundwater remediation activities, as required under RCRA, CERCLA, and/or the TPA, are in various stages of assessment, risk-based end-state development, corrective action, and/or active remediation. For a more comprehensive discussion of remediation at Hanford, see Section 2.3 of this CRD.

Regarding the commentor's concern about the transport of LLW and MLLW from other DOE sites to Hanford for disposal, DOE will be deferring the decision on sending LLW or MLLW from other DOE sites to Hanford for disposal (with some limited specific exceptions), at least until the WTP is operational, subject to appropriate NEPA review. For a more comprehensive discussion on the transport and disposal of offsite waste, see Section 2.1 of this CRD.

The impacts of the offsite waste in terms of radiological risk are presented in the Summary, Section S.5.5.3, and Chapter 2, Section 2.10, Key Environmental Findings. These sections discuss the radiological risk differences between including and not including offsite waste disposal at IDF-East.

The *TC & WM EIS* analysis shows that receipt of offsite waste streams that contain specific amounts of certain isotopes, specifically, iodine-129 and technetium-99, could cause an adverse impact on the environment. Therefore, one means of mitigating this impact would be for DOE to limit disposal of offsite waste streams at Hanford. Other mitigation measures, such as recycling secondary-waste streams into the primary-waste-stream feeds within the WTP to increase iodine-129 capture in ILAW and bulk vitrification glass, are discussed in Chapter 7, Section 7.5, of this final EIS.

Commentor No. 57: Jeffrey Weih

From: Jeffrey Weih [jweih@yahoo.com]
Sent: Thursday, February 11, 2010 4:18 PM
To: tc&wmeis@saic.com
Subject: hanford mess

Clean up Hanford completely! *57-1*

No more acceptance of waste until this is done! *57-2*

57-1 Regarding the status of groundwater contamination and remediation at Hanford, groundwater remediation activities, as required under RCRA, CERCLA, and/or the TPA, are in various stages of assessment, risk-based end-state development, corrective action, and/or active remediation. For a more comprehensive discussion of remediation at Hanford, see Section 2.3 of this CRD.

57-2 Regarding the commentor's concern about the transport of LLW and MLLW from other DOE sites to Hanford for disposal, DOE will be deferring the decision on sending LLW or MLLW from other DOE sites to Hanford for disposal (with some limited specific exceptions), at least until the WTP is operational, subject to appropriate NEPA review. For a more comprehensive discussion on the transport and disposal of offsite waste, see Section 2.1 of this CRD.

In general, the scope of this *TC & WM EIS* does not include groundwater remediation activity as part of the proposed actions evaluated. DOE is implementing an extensive, ongoing cleanup program at Hanford, as required under RCRA, CERCLA, and/or the TPA, a legal agreement between DOE, Ecology, and EPA. The TPA identifies cleanup actions and schedules, called milestones. The TPA agencies completed negotiations on several Hanford cleanup projects, including the establishment of 29 additional and/or accelerated groundwater and Columbia River protection milestones and target dates.

Commentor No. 58: Keeley Harding

From: Keeley Harding [createbeautyexposetruth@yahoo.com]
Sent: Thursday, February 11, 2010 5:56 PM
To: tc&wmeis@saic.com
Subject: NONE of the public wants more waste at Hanford especially since it's own has not been 100% cleaned up!

Our answers will never change for as long as Hanford-people keep coming, going and asking. If I asked everyone I know and everyone they know and on and on, no one would say, "I don't want Hanford cleaned up because it costs too much money. Our health, salmon and groundwater are not worth it. I would love to be exposed to highly toxic waste alongside me on the freeway. I think the exponentially increased cancer and other health risks would be an exciting challenge, especially for my children! I think the whole country's nuclear waste should be stored on the banks of a major river near a volcano."

Most people I hear who say they've been coming to Hanford hearings for 20 years are in their 50s or 60s. Not me, I'm 23. I've been attending with my parents and brother in Hood River since I was a little kid. I have vivid images in my memory of the variety of hearings over the years, accompanied by the DeBrulers and the many other heroes who always show up. Meanwhile the USDOE panelists come and go. Buses of Richlanders used to come crash, but I think they gave up on convincing Hood Riverites that radiation is good for health.

I, we all, demand that USDOE thoroughly clean up all 53 million gallons of buried nuclear waste as well as the millions of gallons that have already leaked and begun reaching the Columbia River. We must always clean up first, as a rule. And of course disassemble the FFTF. Nuclear energy is not the future. It has been a horrible disaster and should never be pursued anywhere again. *58-1* *58-2*

I, we all, demand that USDOE forget once and for all the proposal to ship radioactive waste from across the country to Hanford along I-5, I-84 and all the other interstates this proposal would effect. USDOE's own analysis admits that shipping waste would lead to as many as 816 fatal radiation-induced cancers in adults from the trucks en route, barring accidents or terrorist attacks. Further, children are 3 to 10 times more susceptible to cancer. And the USDOE analysis must include the effects on threatened and endangered species. *58-3* *58-4* *58-5*

Our government DOES have enough money to clean up Hanford. Money just needs to be reallocated. It doesn't matter the cost, Hanford must be cleaned up, before everyone who has any connection to the perceived success of nuclear power is dead. We cannot leave this mess for our children when they will be so far beyond the idea of nuclear power... onto actual safe, renewable energies. *58-6*

58-1 As analyzed in this *TC & WM EIS*, 67 of the 149 SSTs at Hanford are known or are suspected to have leaked liquid waste to the environment between the 1950s and the present, some of which has reached the groundwater. Estimates of the total leak loss range from less than 2.8 million to as much as 3.97 million liters (750,000 to 1,050,000 gallons). DOE recognizes that groundwater contamination from past leaks is a concern at Hanford and its potential impact on the Columbia River.

Regarding the status of groundwater contamination and remediation at Hanford, groundwater remediation activities, as required under RCRA, CERCLA, and/or the TPA, are in various stages of assessment, risk-based end-state development, corrective action, and/or active remediation. For a more comprehensive discussion of remediation at Hanford, see Section 2.3 of this CRD.

58-2 Comment noted.

58-3 Regarding the commentor's concern about the transport of LLW and MLLW from other DOE sites to Hanford for disposal, DOE will be deferring the decision on sending LLW or MLLW from other DOE sites to Hanford for disposal (with some limited specific exceptions), at least until the WTP is operational, subject to appropriate NEPA review. For a more comprehensive discussion on the transport and disposal of offsite waste, see Section 2.1 of this CRD.

58-4 The value of 816 LCFs is from the results provided in the *GNEP PEIS* (DOE 2008b). This value represents the maximum impacts associated with 50 years of transportation activities supporting the operations of all existing U.S. commercial light-water reactors if they all were replaced with high-temperature, gas-cooled reactors. The *GNEP PEIS* was canceled by DOE on June 29, 2009 (74 FR 31017). As shown in the Summary of this *TC & WM EIS*, Section S.5.3; Chapter 2, Section 2.8.3.10; and Chapter 4, Section 4.3.12, it is unlikely that the estimated total public radiation exposures from transporting radioactive waste to Hanford for disposal would result in any additional LCFs.

There is no existing guidance that recommends dose coefficients for children's exposure to external radiation. DOE acknowledges that children have an elevated sensitivity to radiation exposure. The most recent guidance for use of exposure-to-dose coefficients related to external exposure (ionizing radiation) is used in the analysis. This guidance can be found in Federal Guidance Report No. 12, *External Exposure to Radionuclides in Air, Water, and Soil* (Eckerman and Ryman 1993). This guidance provides estimates for an adult,

but not for children. For internal exposure to radiation through inhalation and ingestion, EPA currently recommends that assessors calculate chronic exposures by summing time-weighted exposures that occur at each stage of life (EPA 2009). Using this approach, exposure-to-dose coefficients for internal exposure could be determined; however, guidance that provides this information has yet to be developed.

As stated in the National Research Council's Report in Brief on Biological Effects of Ionizing Radiation (BEIR) VII, *Health Risks from Exposure to Low Levels of Ionizing Radiation: BEIR VII Phase 2* (National Research Council 2006), BEIR VII estimates excess deaths for the sex and age distribution of the U.S. population in terms of the number of excess deaths per million people per absorbed dose, which supports the previously reported dose-to-risk conversion factor estimate for developing LCFs (DOE 2003a). The National Research Council report also shows that the maximum number of excess deaths would be 610 LCFs per million people per person-rem of dose, compared with about 42 out of 100 individuals who are expected to develop solid cancer or leukemia from other causes, assuming a sex and age distribution similar to that of the entire U.S. population. The BEIR VII dose-to-risk conversion factor is essentially equivalent to the estimate of 600 LCFs per million people per person-rem used in the transportation analysis in this *TC & WM EIS*. The health risk effect in the *Draft* and *Final TC & WM EIS* transportation analysis is therefore consistent with BEIR VII in regard to determining the number of LCFs.

58-5 This *TC & WM EIS* does analyze the impacts of the various alternatives on threatened and endangered species. With respect to tank closure, this discussion is presented in Chapter 4, Sections 4.1.7.1 (Alternative 1: No Action), 4.1.7.2.4 (Alternative 2A), 4.1.7.3.4 (Alternative 2B), 4.1.7.4.4 (Alternative 3A), 4.1.7.5.4 (Alternative 3B), 4.1.7.6.4 (Alternative 3C), 4.1.7.7.4 (Alternative 4), 4.1.7.8.4 (Alternative 5), 4.1.7.9.4 (Alternative 6A), 4.1.7.10.4 (Alternative 6B), and 4.1.7.11.4 (Alternative 6C). FFTF decommissioning impacts on threatened and endangered species are addressed in Chapter 4, Sections 4.2.7.1 (Alternative 1: No Action), 4.2.7.2.4 (Alternative 2: Entombment), and 4.2.7.3.4 (Alternative 3: Removal [this was Section 4.2.7.3.3 in the *Draft TC & WM EIS*]). Waste management impacts on threatened and endangered species are addressed in Chapter 4, Sections 4.3.7.1 (Alternative 1: No Action), 4.3.7.2.3 (Alternative 2: Disposal in IDF, 200-East Area Only), and 4.3.7.3.3 (Alternative 3: Disposal in IDF, 200-East and 200-West Areas). Threatened and endangered species are further addressed in Chapter 4, Section 4.4.6.3 (Combination of Alternatives),

Commentor No. 58 (cont'd): Keeley Harding

Chapter 6, Section 6.3.7.2 (Short-Term Cumulative Impacts), and Chapter 7, Sections 7.1.7 (Mitigation) and 7.2.7 (Unavoidable Adverse Environmental Impacts). Long-term ecological risk is addressed in Chapter 5, Sections 5.1.3 (Tank Closure Alternatives), 5.2.3 (FFTF Decommissioning Alternatives), and 5.3.3 (Waste Management Alternatives). While these Chapter 5 sections do not specifically address threatened and endangered species, the analysis presented generally would be applicable to this group of species.

58-6 Comment noted.

Commentor No. 59: Timothy Henwood

From: Timothy Henwood [henfez@gmail.com]
Sent: Thursday, February 11, 2010 6:13 PM
To: tc&wmeis@saic.com
Subject: Comment on Hanford Site Draft Tank Closure

We need to find a better way to boil water than one that leaves thousands of years of deadly byproducts. *59-1*

You are the Department of Energy, not the Department of Big Energy Companies.

This country is founded on the principle of "we the people".

Never forget that and you will make the right decisions.

Regards,

Timothy Henwood
Portland, Oregon

59-1 Nuclear power generation is not within the scope of this *TC & WM EIS*. This EIS addresses proposed actions to retrieve, treat, and dispose of Hanford tank waste; decommission FFTF; and expand waste disposal capacity at Hanford to provide for disposal of on- and offsite DOE waste. The disposal of other waste, including waste associated with commercial nuclear power generation, is beyond the scope of this EIS.

Commentor No. 60: Ineke Deruyter

From: ineke deruyter [ideruyter@hotmail.com]
Sent: Friday, February 12, 2010 1:32 AM
To: tc&wmeis@saic.com; ken.niles@state.or.us
Subject: Clean up Hanford Now.

No new nuclear waste to the site!! Don't make the dump worse than it already is. CLEAN IT UP NOW! Thank you,

Ineke Deruyter-9322 N. Oswego Ave, Portland, OR 97203

60-1

60-1 Regarding the commentor's concern about the transport of LLW and MLLW from other DOE sites to Hanford for disposal, DOE will be deferring the decision on sending LLW or MLLW from other DOE sites to Hanford for disposal (with some limited specific exceptions), at least until the WTP is operational, subject to appropriate NEPA review. For a more comprehensive discussion on the transport and disposal of offsite waste, see Section 2.1 of this CRD.

Commentor No. 61: Phyllis Weih

From: pbweih@comcast.net
Sent: Friday, February 12, 2010 7:45 PM
To: tc&wmeis@saic.com
Subject: TC & WM EIS (Tank Closure & Waste Management Environmental Impact Statement)

Dear Ms Durant,

You ask for comments; here they are:

I think about your children, and my grandchildren, and your great-grandchildren, and all the children to come and the increase in cancer that exposure to radiation is known to cause. *61-1*

And then I think of accidents, or equipment failures, or deliberate acts of terrorism. One or more of them will eventually happen. Complex systems theory explains why this is true. *61-2*

I think about the plume of radioactivity coming from Hanford that is already contaminating the soil and groundwater around the site and the elevated levels of radioactive thorium along the Columbia River, and I realize that the radioactive contamination from Hanford has never been contained. NEVER been thoroughly contained! Think about that! And your want me/us to believe that you can bring MORE nuclear waste from around the entire country, and that you will NOW contain this new waste too? I don't believe you will do it. Nor do I believe that you can safely ship thousands of truckloads of the most toxic materials on the planet across thousands of miles safely. *61-3* *61-4*

So I say, I beg, I demand that you save our water, save our salmon, and save generation after generation of people and animals from heartache and death.

Do not bring in off site nuclear waste. Keep it where it is and "contain" it there.

Clean up the existing contamination at Hanford to 99.9% of what is there or is possible, and spend the money to protect the workers. We spend money to go to war; we spend money to bail out institutions that have failed us and yet are "too big to fail"; I don't understand why we can't do this clean up. *61-5* *61-6*

Sincerely,

Phyllis Weih
Portland, OR

61-1 Scientific data indicate that health effects from radiation exposure are more pronounced in children than adults. As discussed in Appendix K, Section K.1.1.6, of this *TC & WM EIS*, a number of authoritative studies provide guidance on risk factors relating health effects to dose. Section K.1.1.6 discusses the scientific evidence relating radiation dose to incidence of cancers, both fatal and nonfatal. The discussion indicates that the fatal cancer risk factor of 0.0006 reflects an age distribution that includes children and is generally regarded as conservative. Appendix Q, Section Q.2.4.2, explains that nuclide-specific risk coefficients, developed using techniques that account for gender and age, were used for the long-term human health impacts analysis.

61-2 Hanford facility operations and security are intended to prevent such incidents from occurring; nevertheless, this *TC & WM EIS* includes analyses of the potential impacts on members of the public resulting from accidents and intentional acts of destruction. The results of these analyses are presented in Chapter 4, Sections 4.1.11, 4.2.11, and 4.3.11. More-detailed descriptions of the accident scenarios and the methods of analysis are presented in Appendix K, Section K.3.

61-3 Regarding the status of groundwater contamination and remediation at Hanford, groundwater remediation activities, as required under RCRA, CERCLA, and/or the TPA, are in various stages of assessment, risk-based end-state development, corrective action, and/or active remediation. For a more comprehensive discussion of remediation at Hanford, see Section 2.3 of this CRD.

61-4 Regarding the commentor's concern about the transport of LLW and MLLW from other DOE sites to Hanford for disposal, DOE will be deferring the decision on sending LLW or MLLW from other DOE sites to Hanford for disposal (with some limited specific exceptions), at least until the WTP is operational, subject to appropriate NEPA review. For a more comprehensive discussion on the transport and disposal of offsite waste, see Section 2.1 of this CRD.

61-5 The impacts of different levels of tank waste retrieval and of different types of SST system closure are addressed in the *TC & WM EIS* analyses. These include Tank Closure Alternatives 4, 6A, and 6B, which evaluate 99.9 percent retrieval of the tank waste and clean closure of all or part of the SST system. Decisions made by DOE on the proposed actions will be based on a number of factors, including health and safety, environmental, economic, and technical considerations; agency statutory missions; and national policy considerations. The decisions on the selected course of action and supporting rationale will be documented in a ROD

Commentor No. 61 (cont'd): Phyllis Weih

issued no sooner than 30 days after the EPA Notice of Availability for this *Final TC & WM EIS* is published in the *Federal Register*.

61-6 Funding to clean up Hanford is beyond the scope of this *TC & WM EIS*.

Commentor No. 62: John Galle

From: John Galle [john.galle.pe@gmail.com]
Sent: Saturday, February 13, 2010 12:42 AM
To: tc&wmeis@saic.com
Subject: Hanford Tank Closure EIS Hearing Comments...

Hello Ms. Burandt-

I attended the public hearing in Portland on the Hanford Tank Closure EIS. I stayed through the initial presentations and listened to a few of the public comment speakers. The hearing was informative. But, I was surprised the DOE only sent one person to fend off what could have almost certainly could have been predicted to be a hostile crowd. I have worked in the nuclear industry for over 20 years, so I feel your pain. I was at the hearing to learn about the cleanup effort since I may seek to work on the project sometime in the future.

I did listen to Mr. Colette speak across the hall before the hearing. And, he repeated some of the same info in the public meeting. Frankly, some of what he said even scared me and I've worked a lot around radioactive material. Anyway, the reason I am writing you is that there are a few issues that he brought up that really need to be addressed head on so that people aren't stirred up into a frenzy:

1 847 people will die from cancer as a result of being exposed to radiation from shipments along the transport route. Mr. Colette said he got this from DOE documents. Having worked in the nuclear industry for so long, I am virtually certain that that number represents some non-credible worst case scenario. Someone from DOE has to refute his assertion and explain how that number was arrived at and what the realistic expected consequences would be. *62-1*

2 Mr. Colette asserted that the DOE finds truck drivers who just aren't smart enough to realize the health hazard from what they are hauling. I am virtually certain, if these people are receiving dose (and they must get some even though you said they did not) that they are subject to the Federal radworker radiation limits. People should know this. *62-2*

3 Mr. Colette asserted that a single accident during transport through Portland, would kill thousands of people and make much of the city unlivable. Again, I am virtually certain that the consequences he stated were from some non-credible worst case scenario. Someone from DOE has to clarify the assumptions made and state the most probable accident consequences. *62-3*

4 Why isn't the DOE recommending removal of the in-ground tanks and the contaminated earth? Now, I am assuming that the following is true. People need to be told that the DOE has investigated all viable methodologies and *62-4*

62-1 Regarding the commentor's concern about the transport of LLW and MLLW from other DOE sites to Hanford for disposal, DOE will be deferring the decision on sending LLW or MLLW from other DOE sites to Hanford for disposal (with some limited specific exceptions), at least until the WTP is operational, subject to appropriate NEPA review. For a more comprehensive discussion on the transport and disposal of offsite waste, see Section 2.1 of this CRD.

62-2 DOE's *Radioactive Material Transportation Practices Manual for Use with DOE O 460.2A* (DOE M 460.2-1A) stipulates carrier/driver requirements for radioactive material and waste shipments. All Federal and contractor entities subject to this manual must perform transportation activities in a manner that meets or exceeds those requirements, except as otherwise specified by the manual. Although DOE has processes and programs in place to monitor carrier performance and safety, it is ultimately the responsibility of the carrier to follow applicable regulations.

Regarding occupational exposure limits, as stated in Appendix H, "Transportation," of this *TC & WM EIS*, DOE Standard 1098-2008 requires that the maximum annual dose to a worker be no more than 100 millirem per year unless the individual is a trained radiation worker, in which case the dose would be administratively limited to 2 rem per year. If an escort is required, the exposure to each individual escort would be administratively limited to 2 rem per year. Note that the maximum annual dose to a transportation worker would be 100 millirem per year unless the individual is a trained radiation worker. For the latter, DOE has processes and programs in place to monitor carrier performance and safety to ensure that carriers are providing proper training and guidance to transportation workers.

62-3 Because radioactive waste analyzed in this *TC & WM EIS* would originate from DOE sites to the east and southeast of Hanford, no waste shipments are expected to pass through or near Portland, Oregon. Appendix H shows the specific routes that were analyzed. Further, Appendix H summarizes the impacts resulting from the most severe reasonably foreseeable potential accident. Based on the results, the risk of an additional LCF from such an accident would be very small.

62-4 The impacts of different levels of tank waste retrieval and of different types of SST system closure are addressed in the *TC & WM EIS* analyses. These include Tank Closure Alternatives 4, 6A, and 6B, which evaluate 99.9 percent retrieval of the tank waste and clean closure of all or part of the SST system. As required by NEPA, this *TC & WM EIS* addresses the impacts on both the short- and long-term

Commentor No. 62 (cont'd): John Galle

there just is no way to do the work without endangering the workers (stress the importance of this…the folks in the audience didn't seem overly concerned about worker safety), that extensive excavation may potentially cause new or bigger problems, and that a potential delay of the cleanup of X years could result from the expanded scope which in turn would have its own consequences. You could mention added cost, but the audience wasn't really interested in hearing about what would have to be spent. *62-4 cont'd*

5 That the contamination entering the Columbia River is (or will be??) 1500 times the drinking water limits. The DOE needs to state why this is okay. I am assuming that, as in most cases, the solution to pollution is dilution. *62-5*

I hope you find my comments useful and thank you for your presentation at the hearing.

John Galle
2530 Hillcrest Drive
West Linn, OR 97068

human environment. Workers related to the activities being analyzed are part of the human environment, and impacts on workers are presented in Appendix K and Chapter 4, Sections 4.1.10, 4.2.10, and 4.3.10, of this EIS. Decisions made by DOE on the proposed actions will be based on a number of factors, including health and safety, environmental, economic, and technical considerations; agency statutory missions; and national policy considerations. The decisions on the selected course of action and supporting rationale will be documented in a ROD issued no sooner than 30 days after the EPA Notice of Availability for this *Final TC & WM EIS* is published in the *Federal Register*.

62-5 As discussed in Chapter 5 of this *TC & WM EIS*, DOE acknowledges that benchmark standards could be exceeded in groundwater at the Core Zone Boundary and/or at the Columbia River nearshore at various dates. The term "benchmark standards" as used in this *TC & WM EIS* represents dose or concentration levels that correspond to established human health effects. For groundwater, the benchmark is the MCL, provided that an MCL is available. Ecology may impose additional mitigation measures through future permitting processes or remedial actions under the scope of the TPA.

In reference to the commentor's statement that "contaminants are currently entering the Columbia River at levels greater than 1,500 times the drinking water standard," the location along the Columbia River, the timing, and the constituents to which the commentor refers are not clear. Additional information has been added to this *Final TC & WM EIS* to further describe the groundwater conditions at Hanford. Specifically, the commentor is referred to figures in Appendix U depicting maximum concentrations of several contaminants at various Columbia River nearshore locations, as follows: Figures U–18 and U–19 show chromium concentrations of about 61 and 380 micrograms per liter, respectively (relative to the benchmark standard of 100 micrograms per liter), and most concentrations are below 20 micrograms per liter; Figure U–20 shows a chromium concentration of about 5 micrograms per liter; Figures U–21 through U–23 show similar nitrate concentrations; Figures U–25 and U–26 show strontium concentrations near 320 picocuries per liter (relative to the benchmark standard of 8 picocuries per liter); Figure U–28 shows tritium concentrations of about 14,000 picocuries per liter (relative to the benchmark standard of 20,000 picocuries per liter); and Figure U–34 shows uranium isotope concentrations near 145 picocuries per liter (relative to the benchmark standard of 15 picocuries per liter).

Commentor No. 62 (cont'd): John Galle

DOE believes it is more accurate to say that there are several areas of nearshore groundwater contamination that exceed benchmark standards by one to two orders of magnitude (as opposed to more than three), but that these areas are narrowly confined; that groundwater contamination in the vicinity of operable units is more typically near or below the benchmark; and that groundwater contamination away from operable units (i.e., the bulk of the shoreline) is more than several orders of magnitude below benchmarks.

Commentor No. 63: Ester McGinnis

From: bmcginnis [bmcginn@pacifier.com]
Sent: Saturday, February 13, 2010 4:20 PM
To: tc&wmeis@saic.com
Subject: Hanford

Ester McGinnis, 8331 SW 59th Ave., Portland, OR 97219

I was unable to attend the Feb. 10 public hearing, so I am taking this way of speaking my piece about Hanford.

My complaint about nuclear use, whether for war or peace, is that it is unfinished research. When any new technology becomes available , BEFORE IT IS PRESENTED TO THE PUBLIC FOR GENERAL USE, THE DISCOVERERS AND / OR DEVELOPERS MUST BE HELD ACCOUNTABLE FOR RETURNING THE OBJECT TO THE ELEMENTS IT BEGAN WITH , OR TO A NON-TOXIC SUBSTANCE THAT CAN BE USED FOR ANOTHER PURPOSE.

63-1

In the case of nuclear waste this has not been done, is still not a subject of research (or so it seems--over 60 years of research/use) and we still have no solution for the ever mounting waste. Waste that is known to cause cancer and other serious health problems. Those who have power in this enterprise still disregard the public GOOD in making decisions about places like Hanford, and propose actions that are known to do damage to the vulnerable.

I have hoped that in my lifetime I would know that people of conscience would understand what I am saying ---and at last I have had the opportunity to observe a small step in that direction---a man who has developed a process to turn oil derived plastics back into a usable oil !! Halleluiah !!!

63-1 One of the purposes of this *TC & WM EIS* is to analyze the range of reasonable alternatives to safely retrieve and treat radioactive, hazardous, and mixed waste from the tank systems; close the SST system; and store and/or dispose of the waste generated from these activities at Hanford. DOE acknowledges that long-term actions are required to permanently reduce the risk to human health and the environment posed by the waste in the tank systems.

Commentor No. 64: Bobbie Morgan

From: Bobbie Morgan [morgan.bobbie@gmail.com]
Sent: Sunday, February 14, 2010 1:26 PM
To: tc&wmeis@saic.com
Subject: Draft Tank Closure and Waste Management EIS/Hanford

Dear Department of Energy Staff:

I object to the proposed "preferred alternative" TCWMEIS that would use Hanford as a national radioactive waste dump for nuclear weapons and power programs. Importing radioactive and hazardous waste to Hanford, when the current tanks are leaking into the Columbia, and spreading into local groundwater, is unconscionable. Instead, we need to clean up the awful, radioactive mess that is already at Hanford (tanks, barrels, unlined trenches, FFTF reactor). *64-1*

The groundwater impacts of the current contaminated waste are already treacherous. Carbon tetrachoride, as an example, is a known carcinogen and is leaking into groundwater at Hanford, right now, as I write this, at levels 50 times safe drinking water standards. This contaminant alone would therefore be responsible for the deaths of 5 of every 1,000 adults who drink this water. *64-2*

Your duty, as a government official working for the citizens of this country, is to create the very best policies to ensure public safety. Your duty is NOT to write "expedient" policies or to make life easier for the Department of Defense and their very troublesome weapons or for the nuclear power industry, whose energy production is not economically or ethically viable. *64-3*

Please go back to the drawing board and write a TCWMEIS that actually cleans up Hanford.

Thank you.

Bobbie Morgan
978 Aaron Avenue
Bainbridge Island, WA
xxx-xxx-xxxx

64-1 Regarding the commentor's concern about the transport of LLW and MLLW from other DOE sites to Hanford for disposal, DOE will be deferring the decision on sending LLW or MLLW from other DOE sites to Hanford for disposal (with some limited specific exceptions), at least until the WTP is operational, subject to appropriate NEPA review. For a more comprehensive discussion on the transport and disposal of offsite waste, see Section 2.1 of this CRD.

As analyzed in this *TC & WM EIS*, 67 of the 149 SSTs at Hanford are known or suspected to have leaked liquid waste to the environment between the 1950s and the present, some of which has reached the groundwater. Estimates of the total leak loss range from less than 2.8 million to as much as 3.97 million liters (750,000 to 1,050,000 gallons). DOE recognizes that groundwater contamination from past leaks is a concern at Hanford and its potential impact on communities downriver from Hanford.

One of the purposes of this *TC & WM EIS* is to analyze potential impacts of DOE's proposed actions to retrieve waste from the buried tanks, treat and dispose of this waste, and close the SST farms by landfill closure, selective clean closure, or clean closure. This analysis is also intended to aid DOE in making decisions regarding cleanup of the past leaks, including remediation of the contamination in the vadose zone to help prevent further contamination from entering the environment.

64-2 Regarding the status of groundwater contamination and remediation at Hanford, groundwater remediation activities, as required under RCRA, CERCLA, and/or the TPA, are in various stages of assessment, risk-based end-state development, corrective action, and/or active remediation. For a more comprehensive discussion of remediation at Hanford, see Section 2.3 of this CRD.

64-3 This *TC & WM EIS* analyzes proposed actions to retrieve waste from the buried tanks, treat and dispose of this waste, and close the SST farms; decommission FFTF; and upgrade/expand waste management capabilities at Hanford to better support ongoing cleanup actions occurring under the TPA.

Commentor No. 65: Brooke Thompson

From: Brooke [brooke@raincity.com]
Sent: Sunday, February 14, 2010 8:17 PM
To: tc&wmeis@saic.com
Subject: Public Comment

Dear Department of Energy Staff:

I am writing this on Valentine¹s Day, as a valentine to my children and grandchildren. I urge you to find another way to dispose of the nuclear waste that TCWNEIS deems a ³preferred alternative². *65-1*

The Hanford site is already in jeopardy. Its FFTF reactor, its unlined trenches, its barrels and tanks NOW leaking radioactive waste into the groundwater and into the Columbia River‹these need to be cleaned up. To add more hazardous waste to the site compounds and befouls an existing morass of toxins. *65-2* *65-3*

A fool is a person who keeps on doing the same thing and expects different results.

- Albert Einstein

I urge you to respond to the problem of the military and power industry by standing firm: public safety and environmental protection is a priority.
Do not sweep this kind of hazard under the public policy carpet for another generation of cancer victims to try to clean up. *65-4*

Please use wisdom and foresight in fashioning a TCWNEIS that addresses the source of nuclear waste and removes the threat that already exists at Hanford and other sites across the country. *65-5*

Thank you,

Brooke Thompson
611 Winslow Way West
Bainbridge Island, WA 98110
xxx-xxx-xxxx

65-1 Decisions made by DOE on the proposed actions will be based on a number of factors, including health and safety, environmental, economic, and technical considerations; agency statutory missions; and national policy considerations. The decisions on the selected course of action and supporting rationale will be documented in a ROD issued no sooner than 30 days after the EPA Notice of Availability for this *Final TC & WM EIS* is published in the *Federal Register*.

65-2 The purpose of this *TC & WM EIS* is to analyze potential impacts of DOE's proposed actions to retrieve and treat the Hanford tank waste; close the Hanford SST system; store and/or dispose of the waste generated from these tank waste activities; decommission FFTF; and expand or upgrade waste management capabilities to support ongoing and planned waste management activities for on- and offsite waste to facilitate cleanup at Hanford and other DOE sites.

Regarding the status of groundwater contamination and remediation at Hanford, groundwater remediation activities, as required under RCRA, CERCLA, and/or the TPA, are in various stages of assessment, risk-based end-state development, corrective action, and/or active remediation. For a more comprehensive discussion of remediation at Hanford, see Section 2.3 of this CRD.

65-3 Regarding the commentor's concern about the transport of LLW and MLLW from other DOE sites to Hanford for disposal, DOE will be deferring the decision on sending LLW or MLLW from other DOE sites to Hanford for disposal (with some limited specific exceptions), at least until the WTP is operational, subject to appropriate NEPA review. For a more comprehensive discussion on the transport and disposal of offsite waste, see Section 2.1 of this CRD.

The impacts of the offsite waste in terms of radiological risk are presented in the Summary, Section S.5.5.3, and Chapter 2, Section 2.10, Key Environmental Findings. These sections discuss the radiological risk differences between including and not including offsite waste disposal at IDF-East.

The *TC & WM EIS* analysis shows that receipt of offsite waste streams that contain specific amounts of certain isotopes, specifically, iodine-129 and technetium-99, could cause an adverse impact on the environment. Therefore, one means of mitigating this impact would be for DOE to limit disposal of offsite waste streams at Hanford. Other mitigation measures, such as recycling secondary-waste streams into the primary-waste-stream feeds within the WTP to increase iodine-129 capture in ILAW and bulk vitrification glass, are discussed in Chapter 7, Section 7.5, of this final EIS.

Commentor No. 65 (cont'd): Brooke Thompson

65-4 Nuclear energy and military weapons production, as well as the management of their resulting waste, are not within the scope of this *TC & WM EIS*. The current Administration has established a Blue Ribbon Commission on America's Nuclear Future that has issued a report and recommendations for a path forward for managing the country's HLW. DOE's decisions regarding management of Hanford waste will be consistent with Administration policies. For a more comprehensive discussion of this topic, see Section 2.10 of this CRD.

65-5 Comment noted.

Commentor No. 66: Kyle Cleys

From: KYLE A CLEYS [kcleys@q.com]
Sent: Monday, February 15, 2010 7:44 PM
To: tc&wmeis@saic.com
Subject: Comments on the Draft TC & WM EIS

Dear Mary Beth Burandt and U.S. Department of Energy,

I wish to make the following comments on the Hanford Draft Tank Closure and Waste Management Environmental Impact Statement:

1. Regarding retrieval of high-level nuclear waste from underground tanks, I would like to see 99.9% of the tank wastes removed or at least to the maximum amount technically possible. *66-1*
2. A second Low-Activity Waste Vitrification Facility should be pursued now so that waste treatment can be completed as soon as possible. The supplemental treatment options of steam reforming, grout and bulk vitrification should be abandoned since they are not as effective. *66-2* *66-3*
3. After removing waste from the Single-shell tanks the tanks themselves should be removed along with contaminated soil and ancillary equipment (the "clean closure" alternative). *66-4*
4. The Fast Flux Test Facility should be removed and the site restored. Entombment is not an acceptable solution. In addition, special components should be treated at Hanford to the greatest extent possible rather than shipping these wastes to the Idaho National Laboratory. *66-5*
5. Waste generated from on-site cleanup should be stored in Hanford landfills only to the extent that they won't ever endanger groundwater or the Columbia River. In addition, existing waste in unlined soil trenches and from tank leaks should be treated and appropriately disposed of. *66-6*
6. Under no circumstances should additional waste be brought to Hanford. The focus should remain on cleaning up what is already there rather than adding more waste. *66-7*

I have to question what sort of people would leave these highly toxic wastes in the environment to endanger future generations. It is our responsibility as a society to clean these wastes up to the best of our ability since we generated them. Cost should not even be a factor in these considerations. This cleanup has been going on for decades now and it is past time to quit stalling and to do the right thing. *66-8*

Sincerely,

Kyle Cleys
3959 NE 40th Avenue
Portland, OR 97212

66-1 The impacts of different levels of tank waste retrieval and of different types of SST system closure are addressed in the *TC & WM EIS* analyses. These include Tank Closure Alternatives 4, 6A, and 6B, which evaluate 99.9 percent retrieval of the tank waste and clean closure of all or part of the SST system. Decisions made by DOE on the proposed actions will be based on a number of factors, including health and safety, environmental, economic, and technical considerations; agency statutory missions; and national policy considerations. The decisions on the selected course of action and supporting rationale will be documented in a ROD issued no sooner than 30 days after the EPA Notice of Availability for this *Final TC & WM EIS* is published in the *Federal Register*.

66-2 This EIS analyzed supplemental LAW treatment capability by building new treatment facilities that are either part of (expanded LAW capacity) or separate (bulk vitrification, steam reforming, or cast stone) from the WTP. As discussed in Chapter 2, Section 2.12, DOE does not have a preferred alternative regarding supplemental treatment for LAW. DOE believes it is beneficial to study further the potential cost, safety, and environmental performance of supplemental treatment technologies. DOE is committed to meeting its obligations under the TPA regarding supplemental treatment for LAW.

66-3 Comment noted.

66-4 Tank Closure Alternatives 4, 6A, and 6B involve selective or complete clean closure of the SST system. As described in Chapter 2, Section 2.5, Alternative 4 would involve selective clean closure of the BX and SX tank farms by removing the tanks and excavating soil to a depth of 3 meters (10 feet) below these tanks; all other SST systems would be closed in place. As described in Section 2.5, Alternative 6A would involve clean closure by removing all SST systems and excavating all contaminated soil to a maximum depth of groundwater. As described in Section 2.5, Alternative 6B would involve clean closure by removing all SST systems, but would only excavate soil to a depth of 3 meters (10 feet) under the tanks.

66-5 Comment noted.

66-6 Chapter 1, Section 1.4, states that DOE has committed to disposing of LLW at Hanford in lined trenches, a change from the past disposal practice of using unlined trenches. DOE ensures that disposal activities are protective of the environment and meet regulatory requirements (see Appendix E, Section E.3.3, for a description of the evolution of past disposal practices). All LLW generated by the tank closure or FFTF decommissioning activities would be disposed of in

Commentor No. 66 (cont'd): Kyle Cleys

lined trenches. Currently, Hanford's solid LLW is sent to the LLBGs; or, if the waste is from CERCLA cleanup activities, the waste is sent to the Environmental Restoration Disposal Facility (ERDF) (see Chapter 3, Section 3.2.12.1.4).

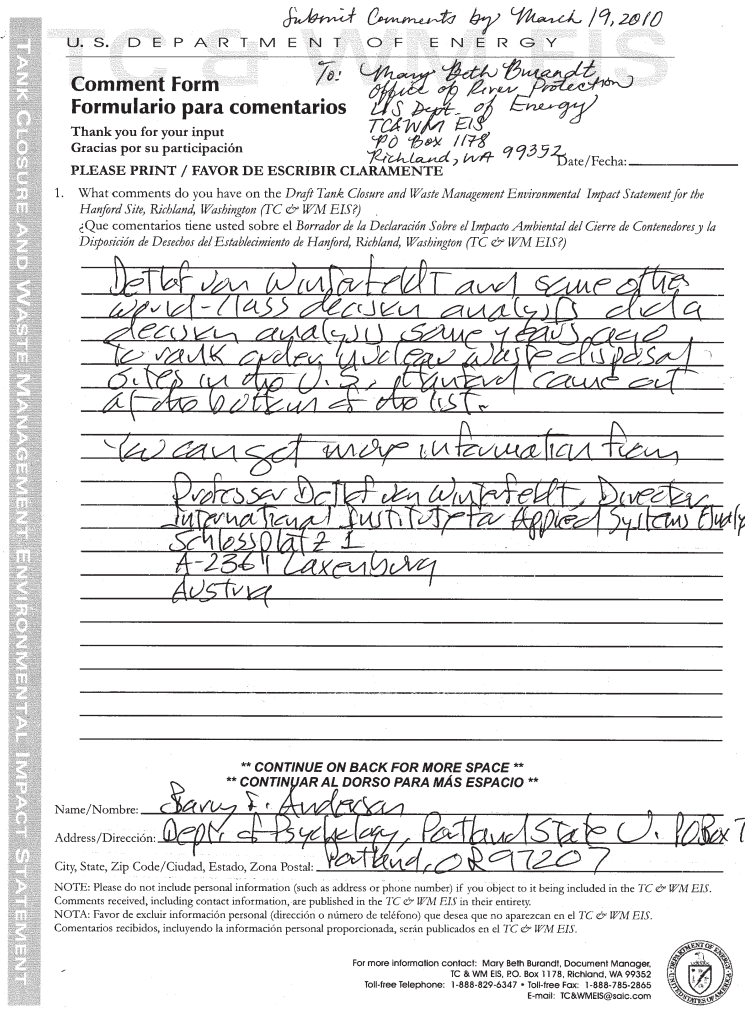
Regarding the status of groundwater contamination and remediation at Hanford, groundwater remediation activities, as required under RCRA, CERCLA, and/or the TPA, are in various stages of assessment, risk-based end-state development, corrective action, and/or active remediation. For a more comprehensive discussion of remediation at Hanford, see Section 2.3 of this CRD.

66-7 Regarding the commentor's concern about the transport of LLW and MLLW from other DOE sites to Hanford for disposal, DOE will be deferring the decision on sending LLW or MLLW from other DOE sites to Hanford for disposal (with some limited specific exceptions), at least until the WTP is operational, subject to appropriate NEPA review. For a more comprehensive discussion on the transport and disposal of offsite waste, see Section 2.1 of this CRD.

In general, the scope of this *TC & WM EIS* does not include groundwater remediation activity as part of the proposed actions evaluated. DOE is implementing an extensive, ongoing cleanup program at Hanford, as required under RCRA, CERCLA, and/or the TPA, a legal agreement between DOE, Ecology, and EPA. The TPA identifies cleanup actions and schedules, called milestones. The TPA agencies completed negotiations on several Hanford cleanup projects, including the establishment of 29 additional and/or accelerated groundwater and Columbia River protection milestones and target dates.

66-8 Chapter 2, Section 2.11, of this EIS summarizes and compares the relative costs of the alternatives. See response to comment 66-1 regarding future DOE decisions.

Commentor No. 67: Barry F. Anderson



Submit Comments by March 19, 2010

U. S. DEPARTMENT OF ENERGY

Comment Form
Formulario para comentarios

Thank you for your input
Gracias por su participación

To: Mary Beth Burandt
Office of River Protection
US Dept. of Energy
TC&WM EIS
PO Box 1178
Richland, WA 99352

Date/Fecha: _____

PLEASE PRINT / FAVOR DE ESCRIBIR CLARAMENTE

1. What comments do you have on the *Draft Tank Closure and Waste Management Environmental Impact Statement for the Hanford Site, Richland, Washington (TC & WM EIS?)*
¿Que comentarios tiene usted sobre el *Borrador de la Declaración Sobre el Impacto Ambiental del Cierre de Contenedores y la Disposición de Desechos del Establecimiento de Hanford, Richland, Washington (TC & WM EIS?)*

Detlef von Winterfeldt and some of the agreed-upon decision analysis data decision analysis some years ago to rank order nuclear waste disposal sites in the U.S. I cannot count at the bottom of the list.

You can get more information from
Professor Detlef von Winterfeldt, Director
International Institute for Applied Systems Analysis
Schlossplatz 1
A-2361 Laxenburg
Austria

** CONTINUE ON BACK FOR MORE SPACE **
** CONTINUAR AL DORSO PARA MÁS ESPACIO **

Name/Nombre: Barry F. Anderson
Address/Dirección: Dept. of Psychology, Portland State U. POBox 751
City, State, Zip Code/Ciudad, Estado, Zona Postal: Portland, OR 97207

NOTE: Please do not include personal information (such as address or phone number) if you object to it being included in the *TC & WM EIS*. Comments received, including contact information, are published in the *TC & WM EIS* in their entirety.
NOTA: Favor de excluir información personal (dirección o número de teléfono) que desea que no aparezcan en el *TC & WM EIS*. Comentarios recibidos, incluyendo la información personal proporcionada, serán publicados en el *TC & WM EIS*.

For more information contact: Mary Beth Burandt, Document Manager,
TC & WM EIS, P.O. Box 1178, Richland, WA 99352
Toll-free Telephone: 1-888-829-6347 • Toll-free Fax: 1-888-785-2865
E-mail: TC&WMEIS@saic.com

67-1

67-1 The study of nuclear waste disposal sites in the United States is not within the scope of this *TC & WM EIS*. The purpose of this *TC & WM EIS* is to analyze potential impacts of DOE's proposed actions to retrieve and treat the Hanford tank waste; close the Hanford SST system; store and/or dispose of the waste generated from these tank waste activities; decommission FFTF; and expand or upgrade waste management capabilities to support ongoing and planned waste management activities for on- and offsite waste to facilitate cleanup at Hanford and other DOE sites.

Commentor No. 68: Robert G. Aungier

U.S. DEPARTMENT OF ENERGY

Comment Form
Formulario para comentarios

Thank you for your input
Gracias por su participación

PLEASE PRINT / FAVOR DE ESCRIBIR CLARAMENTE

Date/Fecha: 2-10-2010

1. What comments do you have on the *Draft Tank Closure and Waste Management Environmental Impact Statement for the Hanford Site, Richland, Washington (TC & WM EIS)*
¿Que comentarios tiene usted sobre el *Borrador de la Declaración Sobre el Impacto Ambiental del Cierre de Contenedores y la Disposición de Desechos del Establecimiento de Hanford, Richland, Washington (TC & WM EIS)*

Dear Mary Beth Burandt, Document Manager,
U.S. Department of Energy 2-10-2010
P.O. Box 1178 Richland, WA 99352
This evening I attended the EIS forum at the DoubleTree Hotel in Portland, OR.
I admit that I have followed the DOE's clean up efforts at the Hanford nuclear site from a distance over the last five to ten years.
Tonight I greatly appreciated the opportunity from the DOE to understand what's being proposed. In keeping with all the speakers who provided comments at the Hearing Tonight, these are my conclusions.
First, clean up all 53 million gallons of buried nuclear WASTE to the 99.9% level. All the tanks must be pulled from the ground and the ground underneath the tanks must be ~~ex~~ excavated and treated as well. Certainly, there is high health Risk to workers exposed in the process. I encourage the DOE to explore and ~~utilize~~ use of Robotics and drones to do the most hazardous aspects of this clean up. The technology of the drone/ROBOTIC efforts may be used at other nuclear sites across the U.S., potentially saving human lives in these efforts (over)

** CONTINUE ON BACK FOR MORE SPACE **
** CONTINUAR AL DORSO PARA MÁS ESPACIO **

Name/Nombre: Robert G. Aungier
Address/Dirección: 467 8th Street
City, State, Zip Code/Ciudad, Estado, Zona Postal: Lake Oswego, Oregon 97034-2908

NOTE: Please do not include personal information (such as address or phone number) if you object to it being included in the *TC & WM EIS*. Comments received, including contact information, are published in the *TC & WM EIS* in their entirety.
NOTA: Favor de excluir información personal (dirección o número de teléfono) que desea que no aparezcan en el *TC & WM EIS*. Comentarios recibidos, incluyendo la información personal proporcionada, serán publicados en el *TC & WM EIS*.

For more information contact: Mary Beth Burandt, Document Manager,
TC & WM EIS, P.O. Box 1178, Richland, WA 99352
Toll-free Telephone: 1-888-829-6347 • Toll-free Fax: 1-888-785-2865
E-mail: TC&WMEIS@saic.com

68-1 The impacts of different levels of tank waste retrieval and of different types of SST system closure are addressed in the *TC & WM EIS* analyses. These include Tank Closure Alternatives 6A and 6B, which evaluate 99.9 percent retrieval of the tank waste and clean closure of the SST system. Decisions made by DOE on the proposed actions will be based on a number of factors, including health and safety, environmental, economic, and technical considerations; agency statutory missions; and national policy considerations. The decisions on the selected course of action and supporting rationale will be documented in a ROD issued no sooner than 30 days after the EPA Notice of Availability for this *Final TC & WM EIS* is published in the *Federal Register*.

68-2 Many of the technologies that DOE anticipates using allow work to be accomplished with low exposure of workers. For example, as described in Appendix E, the various tank waste retrieval technologies would involve the use of remotely controlled and robotic equipment, and many of the waste treatment operations at the WTP would be performed remotely. As discussed in Appendix K, Section K.2, DOE and its contractors would implement controls to limit the exposure of individual workers for all activities in accordance with applicable regulations and guidance (10 CFR 835; DOE Standard 1098-2008). Site procedures and job control plans would incorporate ALARA techniques such as reducing time of exposure, increasing the number of workers and/or shielding, or using remote operations. DOE uses robotics when practical as a means of limiting worker exposure. As individual projects proceeded, DOE and its contractors would continue to look for ways to reduce worker doses. Chapter 7, Section 7.1.10, contains additional information regarding methods of protecting workers.

Commentor No. 68 (cont'd): Robert G. Aungier

Hanford is not to receive any more radioactive, hazardous wastes from other sites in the U.S. It is absolutely insane and ridulous that DOE is proposing shipping ~~waste~~ radioactive waste by rail and truck throughout the United States. There is way too much risk in this proposal. DOE, take it off the table, do not transport nuclear waste from site to site now, next year or ever.

Clean up Hanford now. The miles of trenches and ditches that contain radioactive waste must be cleaned up at Hanford now.

As a concerned citizen, it makes the most sense to proceed with the 99.9% waste removal from the Hanford tanks. Do everything, with the aid of technology (drones/Robotics, etc) to deactivate the radioactive waste now at Hanford. Bring NO more nuclear waste to Hanford – NO trucking/no rail shipping of nuclear waste in my United States. Respectfully, Robert G. Aungier OR 467 8th St. Lake Oswego, 97034

68-3

68-4

68-3 Regarding the commentor's concern about the transport of LLW and MLLW from other DOE sites to Hanford for disposal, DOE will be deferring the decision on sending LLW or MLLW from other DOE sites to Hanford for disposal (with some limited specific exceptions), at least until the WTP is operational, subject to appropriate NEPA review. For a more comprehensive discussion on the transport and disposal of offsite waste, see Section 2.1 of this CRD.

68-4 In general, the scope of this *TC & WM EIS* does not include groundwater remediation activity as part of the proposed actions evaluated. DOE is implementing an extensive, ongoing cleanup program at Hanford, as required under RCRA, CERCLA, and/or the TPA, a legal agreement between DOE, Ecology, and EPA. The TPA identifies cleanup actions and schedules, called milestones. The TPA agencies completed negotiations on several Hanford cleanup projects, including the establishment of 29 additional and/or accelerated groundwater and Columbia River protection milestones and target dates.

Commentor No. 69: Roger Cole

TC & WM EIS
P.O. Box 1178
Richland, WA 99352

February 11, 2010

Greetings:

I was at the Portland hearing tonight and did not stay until my name was called to testify as it ran kind of late. I did get a sense that folks present were not happy about the EIS under consideration. There was a lot of anger and frustration.

The biggest thing that I am concerned about was covered a number of times in testimony and that is bringing in new waste from other parts of the country. That just won't fly. Citizens of Washington approved an initiative in 2004 banning the importation of radioactive waste, but it was overturned in court. We have a radioactive stew brewing in Hanford. It makes no sense to truck in more waste. That waste would go through big Northwest cities. That is a big safety risk. Don't bring in more waste until you get the existing mess cleaned up. *69-1*

Leaky tanks have contaminated the ground water that is finding its way into the Columbia River which people swim in and get their water from. Something must be done about these tanks. They need to be 99.9% cleaned up. To leave 1% of the liquid in the ground is to leave the worst part. *69-2*

If the Fast Flux Test Facility is no longer being used, it should be removed, not entombed. *69-3*

I care about the Columbia River. I swim in it. I sail on it. I used to fish on it. I care about the salmon in the river. I don't want radioactive waste left over from a weapons program before I was born in my river. We've to fix the problems of Hanford. We've got to do it right. We can't walk away from Hanford with the job only partially finished. We need to clean up this mess. The current EIS doesn't go far enough. *69-4*

Sincerely,

Roger Cole
5505 E. Evergreen Blvd
Vancouver, WA 98661

69-1 Regarding the commentor's concern about the transport of LLW and MLLW from other DOE sites to Hanford for disposal, DOE will be deferring the decision on sending LLW or MLLW from other DOE sites to Hanford for disposal (with some limited specific exceptions), at least until the WTP is operational, subject to appropriate NEPA review. For a more comprehensive discussion on the transport and disposal of offsite waste, see Section 2.1 of this CRD.

As shown in the Summary of this *TC & WM EIS*, Section S.5.3; Chapter 2, Section 2.8.3.10; and Chapter 4, Section 4.3.12, it is unlikely that the estimated total public radiation exposures from transporting radioactive waste to Hanford for disposal would result in any additional LCFs. No shipments analyzed in this EIS would pass around or through large West Coast cities such as Portland, Oregon, and Seattle, Washington.

69-2 As analyzed in this *TC & WM EIS*, 67 of the 149 SSTs at Hanford are known or are suspected to have leaked liquid waste to the environment between the 1950s and the present, some of which has reached the groundwater. Estimates of the total leak loss range from less than 2.8 million to as much as 3.97 million liters (750,000 to 1,050,000 gallons). DOE recognizes that groundwater contamination from past leaks is a concern at Hanford and its potential impact on communities downriver from Hanford. One of the purposes of this *TC & WM EIS* is to analyze potential impacts of DOE's proposed actions to retrieve waste from the SSTs, treat and dispose of this waste, and close the SST farms by landfill closure, selective clean closure, or clean closure. This analysis is also intended to aid DOE in making decisions regarding cleanup of the past leaks, including remediation of the contamination in the vadose zone.

The decision to leave 0.1 percent, 1 percent, or more of the waste in the SSTs is one of the decisions supported by this *TC & WM EIS* (see Section S.1.3.1 of the *TC & WM EIS* Summary and Chapter 1, Section 1.4.1). With regard to the disproportionate amount of radioactivity in the residues at the bottom of the tanks, DOE currently does not have a technical basis for making more-specific assumptions about the expected compositions of the waste "heels" that would remain in the tanks after retrieval. Retrieval has been completed on only a small number of SSTs and not much is known about the behavior of, or ability to remove, small volumes of residual waste. However, the tank closure process, which includes detailed examinations of the tanks and residual waste, will require preparation of a performance assessment and a closure plan. These required documents will provide the information and analysis necessary for DOE and the

Commentor No. 69 (cont'd): Roger Cole

regulators to make specific decisions on what levels of residual tank waste are acceptable in terms of short- and long-term risks.

69-3 The commentor's preference for removal of FFTF (FFTF Decommissioning Alternative 3) is noted. However, although nearly all elements of FFTF and the two adjacent support facilities would be removed under this alternative, the lower portion of the Reactor Containment Building (RCB) concrete shell would remain. This would be backfilled with either soil or grout to minimize void space. The area would be regraded and revegetated, with no need for a barrier. DOE issued a ROD (66 FR 7877; January 26, 2001) for the *NI PEIS* (DOE 2000a) wherein DOE announced its decision that FFTF would be permanently deactivated.

69-4 Regarding the status of groundwater contamination and remediation at Hanford, groundwater remediation activities, as required under RCRA, CERCLA, and/or the TPA, are in various stages of assessment, risk-based end-state development, corrective action, and/or active remediation. For a more comprehensive discussion of remediation at Hanford, see Section 2.3 of this CRD.

Commentor No. 70: Krista Thie and Daryl Hoyt

From: Krista & Daryl [krista@gorge.net]
Sent: Friday, February 19, 2010 11:38 PM
To: tc&wmeis@saic.com
Subject: Comment Hanford

Dear EIS team -

If the USA is going to produce radioactive waste - it also must contain it. Why is there still any question that DOE has cleaned up thoroughly the Hanford Nuclear Site? Any amount of high level waste reaching the Columbia River is unacceptable. If we are creating a technological/scientific approach, we need to keep a clear scientific approach and have zero measurable amounts of this stuff reaching any place where it could contaminate US. All must be contained and treated. *70-1*

Our grandchildren depend on our accountability.

Thank you for coming to Hood River - I was unable to attend but glad my friends and community was able to.

Regards,

Krista Thie & Daryl Hoyt
POB 2046
White Salmon WA
98672-2046

70-1 Regarding the status of groundwater contamination and remediation at Hanford, groundwater remediation activities, as required under RCRA, CERCLA, and/or the TPA, are in various stages of assessment, risk-based end-state development, corrective action, and/or active remediation. For a more comprehensive discussion of remediation at Hanford, see Section 2.3 of this CRD.

Commentor No. 71: Pat Hazlett

From: Pat Hazlett [hazlettp@gmail.com]
Sent: Saturday, February 20, 2010 11:35 AM
To: tc&wmeis@saic.com
Subject: Hanford
Attachments: Hanford.rtf

7215 SW 8th Ave
Portland, OR 97219
February 9, 2010

TC & WM EIS
P.O. Box 1178
Richland, WA 99352

To Whom It May Concern:

I am outraged that after so many years and setbacks Hanford is still not being cleaned up to the degree necessary for the environment and people living in the Columbia River area. If this isn't bad enough it is being proposed that it be a storage facility for more nuclear wastes. *71-1*

I am in favor of no more waste added to Hanford. I am saying "No" to Hanford being a national radioactive and radioactive-hazardous waste dump. We need to limit wastes in Hanford landfills to amounts and types of Hanford clean-up wastes which won't cause future leakage and violate cancer risk and other standards. And finally we need to dig up plutonium and other "Transuranic" wastes in unlined soil disposal ditches and tank leaks, treat the wastes and dispose of them in deep geologic repositories. We need to dig up other wastes from unlined soil ditches and tank leaks, treat them, and dispose of them in a regulated commercial radioactive waste facility which is not above drinkable groundwater or next to a river. *71-2*

I am also concerned about the increased risks of cancer from transportation of radioactive wastes. I live very close to Interstate 5 and the thought of this added exposure is not acceptable to me. *71-3*

I would appreciate a response to this letter. *71-4*

Pat Hazlett

71-1 Regarding the commentor's concern about the transport of LLW and MLLW from other DOE sites to Hanford for disposal, DOE will be deferring the decision on sending LLW or MLLW from other DOE sites to Hanford for disposal (with some limited specific exceptions), at least until the WTP is operational, subject to appropriate NEPA review. For a more comprehensive discussion on the transport and disposal of offsite waste, see Section 2.1 of this CRD.

71-2 TRU waste, including waste contaminated with plutonium, in unlined soil disposal trenches is not within the scope of this EIS. However, information on this waste is included in Appendix S, "Waste Inventories for Cumulative Impact Analyses." The scope of this *TC & WM EIS* includes decisions on storage, retrieval, treatment, and disposal of tank waste and closure of the SST system. This closure includes the tank system, along with the vadose zone as impacted by the tank farms (i.e., past leaks). Any LLW generated by the tank closure or FFTF decommissioning activities would be disposed of in the LLBGs, in one of the two active trenches (31 and 34); an IDF; and/or the River Protection Project Disposal Facility (RPPDF), all of which would have liners.

71-3 As shown in the Summary of this *TC & WM EIS*, Section S.5.3; Chapter 2, Section 2.8.3.10; and Chapter 4, Section 4.3.12, it is unlikely that the estimated total public radiation exposures from transporting radioactive waste to Hanford for disposal would result in any additional LCFs. Because radioactive waste analyzed in this *TC & WM EIS* would originate from DOE sites to the east and southeast of Hanford, Interstate 5 would not be used.

71-4 The comments made in the letter, along with a response to each comment, are included in this CRD, which is a volume of this *Final TC & WM EIS*.

Commentor No. 72: Eileen Garvin

From: Eileen Garvin [eileengarvin@gmail.com]
Sent: Saturday, February 20, 2010 2:41 PM
To: tc&wmeis@saic.com
Subject: Hanford Tank Closure and Waste Management Environmental Impact Statement

Dear Ms. Burandt,

Please clean up the existing pollution at Hanford before you consider shipping more radioactive waste to the area.

I grew up in eastern Washington and have lived with this mess my entire life. *72-1*

It seems a pretty simple situation for a complex problem — clean up the mess you already made, that everyone agrees is a problem, before adding to it.

(If my cracked milk glass is leaking all over the table, do I keep pouring milk into it?)

I urge you to stick to the problems at hand:

Clean up the 55-million gallons of buried radioactive waste *72-2*

Do not ship any more radioactive waste from across the county to handford *72-1 cont'd*

Clean up the nuclear waste that has already leaked into the Columbia River. *72-3*

Future generations will thank you!

Best,

Eileen Garvin

72-1 Regarding the commentor's concern about the transport of LLW and MLLW from other DOE sites to Hanford for disposal, DOE will be deferring the decision on sending LLW or MLLW from other DOE sites to Hanford for disposal (with some limited specific exceptions), at least until the WTP is operational, subject to appropriate NEPA review. For a more comprehensive discussion on the transport and disposal of offsite waste, see Section 2.1 of this CRD.

72-2 The scope of this *TC & WM EIS* includes analysis of the environmental impacts of storage, retrieval, treatment, and disposal of tank waste and closure of the SST system. With regard to other cleanup actions, DOE is implementing an extensive, ongoing cleanup program at Hanford under the TPA, a legal agreement between DOE, Ecology, and EPA. The TPA identifies cleanup actions and schedules, called milestones. The TPA agencies recently completed negotiations on several Hanford cleanup projects, including the establishment of 29 additional and/or accelerated groundwater and Columbia River protection milestones and target dates. As noted in Chapter 1, Section 1.4.2, the six sets of cribs and trenches (ditches) that are contiguous to the SSTs are CERCLA past-practice units. These would fall under the barriers placed over the SSTs during closure. They are evaluated in this EIS as part of a connected action because they would be influenced by barrier placement. However, closure of these CERCLA past-practice units is not part of the proposed actions for this EIS. Closure of these units would be addressed at a later date, using the best-available information for technologies that are feasible and appropriate to address these units.

72-3 DOE recognizes that groundwater contamination from past leaks is a concern at Hanford and its potential impact on communities downriver from Hanford. One of the purposes of this *TC & WM EIS* is to analyze potential impacts of DOE's proposed actions to retrieve waste from the buried tanks, treat and dispose of this waste, and close the SST farms. This analysis is also intended to aid DOE in making decisions regarding cleanup of the past leaks. The TPA, a legal agreement between DOE, Ecology, and EPA, identifies cleanup actions and schedules, called milestones. The TPA agencies completed negotiations on several Hanford cleanup projects, including the establishment of 29 additional and/or accelerated groundwater and Columbia River protection milestones and target dates.

Commentor No. 73: Joe Mitchell

From: Joe Mitchell [jjmit@comcast.net]
Sent: Sunday, February 21, 2010 1:58 AM
To: tc&wmeis@saic.com
Subject: Hanford Cleanup

February 20, 2010

Dear USDOE,

I am very much in favor of a TOTAL clean-up of the Hanford site and very much against transporting nuclear and/or toxic waste to the Hanford site. No more! *73-1*

It is our responsibility to neutralize this threat to our wellbeing for ourselves and future generations.

We have amazing creative capacities. We need to use them. We need to fund them.

We need to more than adequately fund research into solving the problem of radioactive waste; and, in the mean time, use the technologies we now possess to clean up this mess. *73-2*

This is a project not unlike the space program. It is important. We need total clean-up. We need to fund it.

Sincerely,

Joe Mitchell
5232 SE Madison St.
Portland, OR 97215-2667

73-1 Regarding the commentor's concern about the transport of LLW and MLLW from other DOE sites to Hanford for disposal, DOE will be deferring the decision on sending LLW or MLLW from other DOE sites to Hanford for disposal (with some limited specific exceptions), at least until the WTP is operational, subject to appropriate NEPA review. For a more comprehensive discussion on the transport and disposal of offsite waste, see Section 2.1 of this CRD.

73-2 This EIS analyzed supplemental LAW treatment capability by building new treatment facilities that are either part of (expanded LAW capacity) or separate (bulk vitrification, steam reforming, or cast stone) from the WTP. As discussed in Chapter 2, Section 2.12, DOE does not have a preferred alternative regarding supplemental treatment for LAW. DOE believes it is beneficial to study further the potential cost, safety, and environmental performance of supplemental treatment technologies. DOE is committed to meeting its obligations under the TPA regarding supplemental treatment for LAW.

Appendix E, Section E.1.3.3.1, discusses the DOE Technology Readiness Assessment that included Business Case No. 7 (LAW First and Bulk Vitrification with Tank Farm Pretreatment), i.e., early startup of the LAW treatment process. However, at the time of the *Draft TC & WM EIS* preparation, DOE had not made a decision on whether to support implementation of this business case. Since then, DOE has commissioned an external technical review of the system planning for alternative supplemental treatment of LAW at Hanford (Kosson et al. 2008). The report (Kosson et al. 2008) from this review concluded that, although the current schedule for completion of the WTP LAW Vitrification Facility and supporting facilities could support early treatment of LAW in 2014, such early startup would require an interim pretreatment capability and the means for disposition of secondary waste. Since 2008, DOE has been evaluating the transition of the WTP from construction to commissioning. Information on this strategy is provided in Appendix E, Section E.1.3.3.2, of this *Final TC & WM EIS*. The *2020 Vision* (WRPS and BNI 2011) evaluates some of the elements identified in earlier DOE reports, but focuses on commissioning of the WTP project and activities essential to starting up the LAW Vitrification Facility, the Analytical Laboratory, and the BOF, as well as the Pretreatment Facility and the HLW Vitrification Facility. For more information regarding the *2020 Vision*, please see Appendix E, Section E.1.3.3.2.

Commentor No. 74: Katharine Kremer and Stephen Young

U. S. DEPARTMENT OF ENERGY

Comment Form
Formulario para comentarios

Thank you for your input
Gracias por su participación

PLEASE PRINT / FAVOR DE ESCRIBIR CLARAMENTE

Date/Fecha: 15 Feb 2010

1. What comments do you have on the *Draft Tank Closure and Waste Management Environmental Impact Statement for the Hanford Site, Richland, Washington (TC & WM EIS)*?
¿Que comentarios tiene usted sobre el *Borrador de la Declaración Sobre el Impacto Ambiental del Cierre de Contenedores y la Disposición de Desechos del Establecimiento de Hanford, Richland, Washington (TC & WM EIS)*?

Dear Friends,

We are very much in favor of a TOTAL clean-up of the Hanford site and very much against transporting nuclear and/or toxic waste to the Hanford site.

It is our responsibility to neutralize this threat to our well being for ourselves and future generations.

We have amazing creative capacities and need to more than adequately fund research into solving the problem of radioactive waste and, in the meantime, apply the technologies we now possess to clean up this mess! This is a project not unlike the space program or the defense program thatled to the end of WW II and, ironically, the problem we now are facing.

Cleaning up part of the mess is not good enough in this case.

Thank you!

74-1

74-2

**** CONTINUE ON BACK FOR MORE SPACE ****
**** CONTINUAR AL DORSO PARA MÁS ESPACIO ****

Name/Nombre: Katharine Kremer and Stephen Young

Address/Dirección: 1040 Oak Terrace

City, State, Zip Code/Ciudad, Estado, Zona Postal: Lake Oswego OR 97034

NOTE: Please do not include personal information (such as address or phone number) if you object to it being included in the *TC & WM EIS*. Comments received, including contact information, are published in the *TC & WM EIS* in their entirety.
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For more information contact: Mary Beth Burandt, Document Manager,
TC & WM EIS, P.O. Box 1178, Richland, WA 99352
Toll-free Telephone: 1-888-829-6347 • Toll-free Fax: 1-888-785-2865
E-mail: TC&WMEIS@saic.com

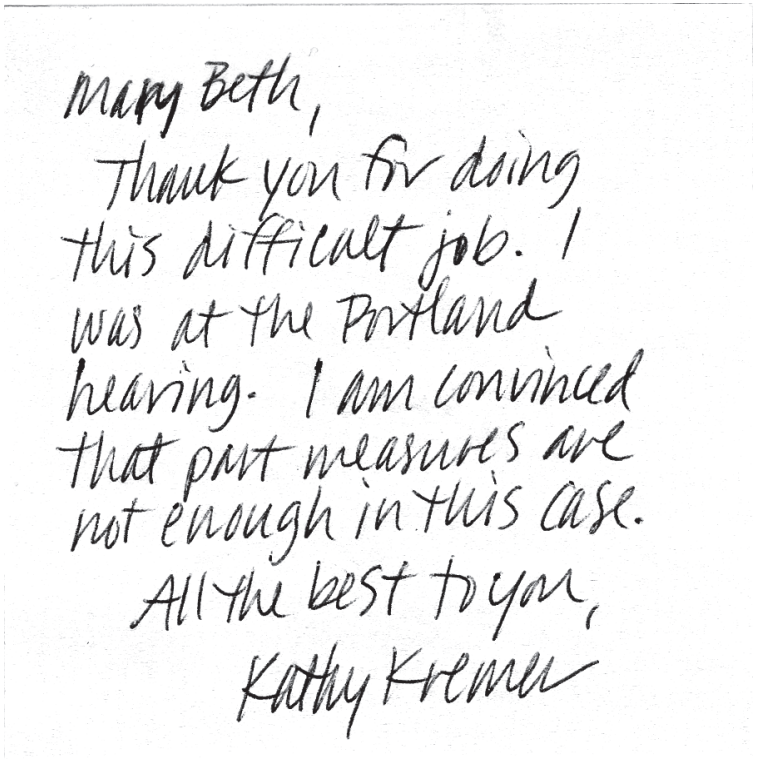
74-1 Regarding the status of groundwater contamination and remediation at Hanford, groundwater remediation activities, as required under RCRA, CERCLA, and/or the TPA, are in various stages of assessment, risk-based end-state development, corrective action, and/or active remediation. For a more comprehensive discussion of remediation at Hanford, see Section 2.3 of this CRD.

One of the purposes of this *TC & WM EIS* is to analyze potential impacts of DOE's proposed actions to retrieve waste from the buried tanks, treat and dispose of this waste, and close the SST farms. This analysis is also intended to aid DOE in making decisions regarding cleanup of the past leaks.

74-2 One of the decisions to be based on this *TC & WM EIS* is the selection of additional waste treatment capability, which could include a second LAW vitrification facility. The timing of the startup of the WTP LAW Vitrification Facility and a facility for additional waste treatment capability would depend on a number of factors, such as availability of funding and priorities within DOE.

Appendix E, Section E.1.3.3.1, discusses the DOE Technology Readiness Assessment that included Business Case No. 7 (LAW First and Bulk Vitrification with Tank Farm Pretreatment), i.e., early startup of the LAW treatment process. However, at the time of the *Draft TC & WM EIS* preparation, DOE had not made a decision on whether to support implementation of this business case. Since then, DOE has commissioned an external technical review of the system planning for alternative supplemental treatment of LAW at Hanford (Kosson et al. 2008). The report (Kosson et al. 2008) from this review concluded that, although the current schedule for completion of the WTP LAW Vitrification Facility and supporting facilities could support early treatment of LAW in 2014, such early startup would require an interim pretreatment capability and the means for disposition of secondary waste. Since 2008, DOE has been evaluating the transition of the WTP from construction to commissioning. Information on this strategy is provided in Appendix E, Section E.1.3.3.2, of this *Final TC & WM EIS*. The *2020 Vision* (WRPS and BNI 2011) evaluates some of the elements identified in earlier DOE reports, but focuses on commissioning of the WTP project and activities essential to starting up the LAW Vitrification Facility, the Analytical Laboratory, and the BOF, as well as the Pretreatment Facility and the HLW Vitrification Facility. For more information regarding the *2020 Vision*, please see Appendix E, Section E.1.3.3.2.

Commentor No. 74 (cont'd): Katharine Kremer and Stephen Young



Mary Beth,
Thank you for doing this difficult job. I was at the Portland hearing. I am convinced that part measures are not enough in this case.
All the best to you,
Kathy Kremer

Response side of this page intentionally left blank.

Commentor No. 75: Rebecca Durr

Feb. 15, 2010

USDOE
P.O. Box 1178
Richland, WA 99352

Dear USDOE,

I would like to comment on my understanding of your environmental impact review of your alternative to cleaning up Hanford.

It seems your alternative is not to clean it up & also to dump more waste there. Hanford is already the most contaminated site in the western hemisphere & for as long as I can remember you have not been cleaning it up. *75-1*

I believe that this is unacceptable. We don't even know everything that has been dumped there or how it has changed through the years. We do know that contaminates have been migrating to the river & the water table, causing unknown dangers. The Columbia River is a magnificent river with ecological, cultural, & historical significance. How can you allow the desecration of this treasure? *75-2*

Please - don't even consider dumping more waste there. We have a serious problem there & it's time we faced up to our obligation to repair the damage *75-3*

75-1 Regarding the commentor's concern about the transport of LLW and MLLW from other DOE sites to Hanford for disposal, DOE will be deferring the decision on sending LLW or MLLW from other DOE sites to Hanford for disposal (with some limited specific exceptions), at least until the WTP is operational, subject to appropriate NEPA review. For a more comprehensive discussion on the transport and disposal of offsite waste, see Section 2.1 of this CRD.

75-2 Among the important elements of the analyses presented in this *TC & WM EIS* are evaluations of the effects that the Tank Closure, FFTF Decommissioning, and Waste Management alternatives could have on migration of contaminants to the river and the potential for long-term impacts on aquatic and riparian ecological resources. Regarding waste management at Hanford, the commentor is referred to Chapter 3, Section 3.2.12.1, Waste Inventories and Activities. Chapter 5, Sections 5.1, 5.2, and 5.3, address analysis of the long-term environmental consequences of implementing the different alternatives on ecological resources (i.e., ecological risk). Included in this analysis is a determination of the impacts of a number of constituents of potential concern (COPCs) on Columbia River aquatic and riparian resources. For a detailed discussion of the impacts of the alternatives on Columbia River ecological resources, the commentor is referred to Appendix P, Section P.3, Impacts on Columbia River Aquatic and Riparian Resources Resulting from Future Contaminant Releases.

75-3 Regarding the status of groundwater contamination and remediation at Hanford, groundwater remediation activities, as required under RCRA, CERCLA, and/or the TPA, are in various stages of assessment, risk-based end-state development, corrective action, and/or active remediation. For a more comprehensive discussion of remediation at Hanford, see Section 2.3 of this CRD.

Commentor No. 75 (cont'd): Rebecca Durr

we've already caused. Let's start cleaning up the mess & let's continue to monitor the health of all aspects of that area, & not stop until we have restored the land & it is once again safe for plants, animals, birds, fish, and people. When you know that it's safe for your grandchildren to swim in the water, dig in the dirt, eat the fish, & breathe the air, then you will know you have done your job well. And when that day comes, let's erect a monument so future generations will know we made a terrible mistake & didn't rest until we corrected it. It will be a warning for the future not to take an action if we do not know all the consequences from that action, no matter how urgent the situation may seem.

75-3 cont'd

Many years ago we did not know how to dispose of nuclear waste, and we still do not know – that is what you should be trying to find out, instead of adding to the piles of contamination along the Columbia River.

75-4

Very truly,
Rebecca Durr
2703 Riverview Drive
Aberdeen, WA 98520

75-4 Regarding research on ways to dispose of nuclear waste, research and development (R&D) on nuclear waste disposal methods began more than 50 years ago. The HLW vitrification treatment technology, for example, has been used around the world for decades. This *TC & WM EIS* analyzes the potential impacts of vitrification and other treatment technologies, waste-form performance, and closure options.

Commentor No. 76: P. Anna Johnson

P. ANNA JOHNSON
6934 NE Thirteenth Avenue Portland, OR 97211
[redacted] · pannaj@mercedlake.com
www.pannajohnson.com

February 15, 2010

To Whom It May Concern:

We call the river "Columbia" after the man who sailed across the Atlantic to find gold for the King and Queen of Portugal. The creation of the river, and the fertile land surrounding it, took millions of years. Then, for thousands of years, there were people who were nourished by fish from the river. They recognized that the river was sacred and they treated it kindly, as though it was a part of their family.

Then other people came, and they buried poison in the land near the river -- poison strong enough to kill the plants and the animals upon contact. Now the poison is spreading through the ground to the once clean river. Fish are dying. Birds are dying. People are dying. And now there is talk about bringing even more poison to the site.

You say that restoring the land and the river to its pristine condition would cost too much money. You have plans for bringing more poison to the region. When will we learn? When will we ever learn?

Sincerely,

P. Anna Johnson

76-1

76-1 Regarding the status of groundwater contamination and remediation at Hanford, groundwater remediation activities, as required under RCRA, CERCLA, and/or the TPA, are in various stages of assessment, risk-based end-state development, corrective action, and/or active remediation. For a more comprehensive discussion of remediation at Hanford, see Section 2.3 of this CRD.

Commentor No. 77: Carrie Anderson

From: Carrie Anderson [treelady@cet.com]
Sent: Monday, February 22, 2010 6:39 PM
To: tc&wmeis@saic.com
Subject: I oppose truckloads of radioactive waste being dumped at Hanford

I cannot believe that we have circled back to this ridiculous option. Hanford is STILL a disaster. The waste is leaking into the Columbia watershed which will eventually end up in the river and then thePacific Ocean. This ocean is NOT separated from the rest of the oceans on the planet. It WILL wash up onto the east coast eventually!! *77-1*

How can the "preferred alternative" to **make Hanford a national radioactive waste dump without fully cleaning up the existing contamination on site** be a SANE response to nuclear waste disposal. *77-2*

Anyone who is paying attention knows there is NO AWAY to throw things anymore.

Any toxins that are thrown away will just keep turning up in our backyards and water sources!! *77-3*

IF we have NO SANE place to dispose of these deadly materials why consider producing more?? *77-4*

I oppose truckloads of radioactive waste being dumped at Hanford *77-5*

Carrie Anderson
Urban Forest Council

Any fool can destroy trees. They cannot defend themselves or run away.

And few destroyers of trees ever plant any... John Muir, naturalist, explorer, and writer (1838-1914)

77-1 DOE recognizes that groundwater contamination from past leaks is a concern at Hanford and its potential impact on communities downriver from Hanford. One of the purposes of this TC & WM EIS is to analyze potential impacts of DOE's proposed actions to retrieve waste from the buried tanks, treat and dispose of this waste, and close the SST farms. This analysis is also intended to aid DOE in making decisions regarding cleanup of the past leaks. The TPA, a legal agreement between DOE, Ecology, and EPA, identifies cleanup actions and schedules, called milestones. The TPA agencies completed negotiations on several Hanford cleanup projects, including the establishment of 29 additional and/or accelerated groundwater and Columbia River protection milestones and target dates.

77-2 Regarding the commentor's concern about the transport of LLW and MLLW from other DOE sites to Hanford for disposal, DOE will be deferring the decision on sending LLW or MLLW from other DOE sites to Hanford for disposal (with some limited specific exceptions), at least until the WTP is operational, subject to appropriate NEPA review. For a more comprehensive discussion on the transport and disposal of offsite waste, see Section 2.1 of this CRD.

77-3 Both DOE and Ecology acknowledge the need to make choices regarding future storage, treatment, and disposal of the waste associated with the SST system. One of the major purposes of this TC & WM EIS is to identify the impacts associated with waste-disposal options.

77-4 Although the waste generated from production activities (e.g., nuclear energy and weapons) is not within the scope of this TC & WM EIS, the management of waste generated from Hanford environmental cleanup activities is one of the proposed actions in this EIS. This TC & WM EIS analyzes disposal options for various types of waste (e.g., LLW, MLLW, HLW), as well as treatment options to convert waste to a form that renders it safe for disposal.

77-5 See response to comment 77-2 for a discussion on the transport and disposal of offsite waste.

Commentor No. 78: Richard Schramm

From: Schramm, Richard : CO IS [RSchramm@LHS.ORG]
Sent: Monday, February 22, 2010 7:58 PM
To: tc&wmeis@saic.com
Subject: Please clean up and preserve Hanford

To Whom It May Concern:

The U.S. Energy Department's plan to import low-level and mid-level radioactive waster from other sites in our country to Hanford after 2022 should be thrown out. Hanford is already one of the most polluted places on Earth and as such no more radioactive waste should be brought to this area for storage. And the fact that Hanford is so close to the Columbia River (i.e., immediately adjacent to it) is another excellent reason that no more radioactive materials should be brought there for storage. Instead, this is a unique area for wildlife that should be preserved in some kind of national monument or park. The Hanford Reach is one of the last great salmon spawning beds and Handford itself is home to wild grasses and wildlife that represent one of the few remaining preserves of what this area was like before man came on the scene to develop it. As such, it should be protected and one should not add injury to insult be bringing more radioactive materials to the site. Instead, it should be cleaned up sooner, rather than later, and any future radioactive materials should be stored in dry, stable geologic formations where there is little water to leach out radioactive elements, such as in Nevada or New Mexico, not right next door to one of the largest rivers in our country. Thank you for taking the time to consider my thoughts on this important matter. *78-1* *78-2* *78-3*

Richard Schramm
3024 N.E. Bryce Street
Portland, OR 97212
(xxx)xxx-xxxx
rschramm@lhs.org

78-1 Regarding the commentor's concern about the transport of LLW and MLLW from other DOE sites to Hanford for disposal, DOE will be deferring the decision on sending LLW or MLLW from other DOE sites to Hanford for disposal (with some limited specific exceptions), at least until the WTP is operational, subject to appropriate NEPA review. For a more comprehensive discussion on the transport and disposal of offsite waste, see Section 2.1 of this CRD.

78-2 As noted in Chapter 3, Section 3.2, General Site Description, on June 9, 2000, the President issued a proclamation (65 FR 37253) establishing the Hanford Reach National Monument on approximately 78,900 hectares (195,000 acres) of Hanford. Much of this land borders the Columbia River. This proclamation recognized the unique character and biological diversity of the area, as well as its geologic, paleontological, historic, and archaeological significance. DOE manages land within the monument that is not subject to existing agreements; however, DOE consults with the Secretary of the Interior when developing any management plans affecting these lands.

See response to comment 78-1 for a discussion on the transport and disposal of offsite waste.

78-3 Regarding the safe disposal of waste generated from nuclear energy production, the current Administration has established a Blue Ribbon Commission on America's Nuclear Future that has issued a report and recommendations for a path forward for managing the country's HLW. DOE's decisions regarding management of Hanford waste will be consistent with Administration policies. For a more comprehensive discussion of this topic, see Section 2.10 of this CRD.

Commentor No. 79: Gabe Bohnee, Director, Environmental Restoration and Waste Management, Nez Perce Tribe

Nez Perce
ENVIRONMENTAL RESTORATION & WASTE MANAGEMENT
P.O. BOX 365 · LAPWAI, IDAHO 83540-0365 · (208) 843-7375 / FAX: 843-7378

February 18, 2010

Ms. Mary Beth Burandt, Document Manager
Office of River Protection
U.S. Department of Energy
P.O. Box 1178
Richland, WA 99352

Re: Comment Extension Request on the *Draft Tank Closure EIS*

Dear Ms. Burandt

The Nez Perce Tribe's Environmental Restoration and Waste Management Division (ERWM) is reviewing the *Draft Tank Closure and Waste Management Environmental Impact Statement for the Hanford Site, Richland, Washington [DOE/EIS-0391]* (TC/WM EIS) for the Nez Perce Tribe (Tribe). This review has been extensive and time consuming, where the ERWM has recognized a need for more time to review the impacts brought forth through this document. Therefore, the ERWM is seeking an extension of 45 days to accommodate the concerns of the Nez Perce Tribe.

The protection of cultural and natural resources at Hanford is of great importance to the Tribe, where this area is encompassed by the Tribe's "Usual and Accustomed" Treaty resource areas, via the Treaty of 1855 between the United States and the Tribe. With long-term potential impacts to this area and the Columbia River, the ERWM work needs to be thorough in technical and policy aspects affecting the Tribe. Lastly, this document and the comments generated by the Tribe need to be completed through the Tribe's policy board, the Nez Perce Tribal Executive Committee (NPTEC), which has a time scale that factors into our extension needs.

ERWM appreciates the longer than normal review period given for the TC/WM EIS, but like other stakeholders and the public, have been overwhelmed with the magnitude of this document. The ERWM would appreciate your consideration in this matter and look forward to hearing your response. If you have any questions please contact David Bernard, davidb@nezperce.org, or Stan Sobczyk stans@nezperce.org of my staff or 208-843-7375.

Sincerely,

Gabe Bohnee
ERWM Director

Cc: David Brockman, DOE-RL Site Manager
Shirley Olinger, DOE-ORP Site Manager
Brandt Petrasek, DOE-HQ Tribal
Jill Conrad, DOE-RL Tribal Nations Program
Stuart Harris, CTUIR DOSE Manager
Russell Jim, Yakama ER/WM Director
Aaron Miles, DNR Manager
Samuel N. Penney, NPTEC Chairman

79-1

79-1 DOE extended the public comment period for another 45 days, for a total comment period of 185 days.

Commentor No. 80: Laurie Fleming

U. S. DEPARTMENT OF ENERGY

Comment Form
Formulario para comentarios

Thank you for your input
Gracias por su participación

PLEASE PRINT / FAVOR DE ESCRIBIR CLARAMENTE

Date/Fecha: 3/23/2010

1. What comments do you have on the *Draft Tank Closure and Waste Management Environmental Impact Statement for the Hanford Site, Richland, Washington (TC & WM EIS?)*
¿Que comentarios tiene usted sobre el *Borrador de la Declaración Sobre el Impacto Ambiental del Cierre de Contenedores y la Disposición de Desechos del Establecimiento de Hanford, Richland, Washington (TC & WM EIS?)*

I do not want to see new waste be transported and dumped at Hanford and anywhere else in our beautiful State of Washington until DOE does a thorough CLEAN up of the waste you have already done. *80-1*

Also, I understand that an earthquake could cause a disaster the size of Chernobyl. Nuclear waste dumped along a fault line is not acceptable. I request full disclosure of earthquake activity reporting from the past, as well as full reporting of future earthquake activity as each occurance happens via media reporting. *80-2*

** CONTINUE ON BACK FOR MORE SPACE **
** CONTINUAR AL DORSO PARA MÁS ESPACIO **

Name/Nombre: Laurie Fleming

Address/Dirección: 2207 S. Southeast Blvd. #3, Spokane, WA 99203

City, State, Zip Code/Ciudad, Estado, Zona Postal: _____

NOTE: Please do not include personal information (such as address or phone number) if you object to it being included in the *TC & WM EIS*. Comments received, including contact information, are published in the *TC & WM EIS* in their entirety.
NOTA: Favor de excluir información personal (dirección o número de teléfono) que desea que no aparezcan en el *TC & WM EIS*. Comentarios recibidos, incluyendo la información personal proporcionada, serán publicados en el *TC & WM EIS*.

For more information contact: Mary Beth Burandt, Document Manager,
TC & WM EIS, P.O. Box 1178, Richland, WA 99352
Toll-free Telephone: 1-888-829-6347 • Toll-free Fax: 1-888-785-2865
E-mail: TC&WMEIS@saic.com

80-1 Regarding the commentor's concern about the transport of LLW and MLLW from other DOE sites to Hanford for disposal, DOE will be deferring the decision on sending LLW or MLLW from other DOE sites to Hanford for disposal (with some limited specific exceptions), at least until the WTP is operational, subject to appropriate NEPA review. For a more comprehensive discussion on the transport and disposal of offsite waste, see Section 2.1 of this CRD.

80-2 Chapter 3, Section 3.2.5.1.1, of this *TC & WM EIS* depicts and discusses the locations of geologic faults relative to Hanford and their potential for producing earthquakes. Section 3.2.5.1.4 discusses the historical seismicity of the Hanford region, including the frequency and magnitude of historic and recent earthquakes, and presents the most recent seismic risk estimates for Hanford. Most of the earthquake information is publicly available online and all cited references, which are listed in Section 3.4, are available upon request or at reference libraries (e.g., Hanford Public Reading Room). As described in Chapter 4, Sections 4.1, 4.2, and 4.3, of this EIS, DOE Order 420.1B and its implementing standards require that nuclear and nonnuclear facilities be designed, constructed, and operated to safeguard the facility, the public, workers, and the environment from natural phenomena hazards, including earthquakes. Consequently, impacts of earthquakes are evaluated for waste management and disposal facilities, tank farms, and the WTP. Information can be found in Sections 4.1.11 and 4.3.11. More-detailed information can be found in Appendix K.

Commentor No. 81: Marilyn Darilek

U. S. DEPARTMENT OF ENERGY

Comment Form
Formulario para comentarios

Thank you for your input
Gracias por su participación

PLEASE PRINT / FAVOR DE ESCRIBIR CLARAMENTE

Date/Fecha: 2/23/10

1. What comments do you have on the *Draft Tank Closure and Waste Management Environmental Impact Statement for the Hanford Site, Richland, Washington (TC & WM EIS)*?
¿Que comentarios tiene usted sobre el *Borrador de la Declaración Sobre el Impacto Ambiental del Cierre de Contenedores y la Disposición de Desechos del Establecimiento de Hanford, Richland, Washington (TC & WM EIS)*?

I believe it is irresponsible to cap over tanks, landfills, dumpsite, and soils, etc. INSTEAD OF enforcing thorough & complete removal &/or containment utilizing best-science processes & methods. THE residents of WA. St. have made abundant sacrifice throughout previous decades by allowing Hanford to continue this heritage of pollution, deceit, disrespect for human health & public safety & environmental degradation.

81-1

Voters overwhelmingly rejected the directive to the federal policy makers to clean up their mess — especially prior to dumping additional nuclear & other contamination wastes. Clean closure is definitely better than closed entombment. It seems insane that this facility was located so near a major river in a known geologically active region — it's time to stop the influx of waste to Hanford! Keep the moratorium in place!

81-2

81-3

81-2 cont'd

** CONTINUE ON BACK FOR MORE SPACE **
** CONTINUAR AL DORSO PARA MÁS ESPACIO **

Name/Nombre: Marilyn Darilek

Address/Dirección: 1814 W. Brimcliff Ln., Spo. WA. 99208

City, State, Zip Code/Ciudad, Estado, Zona Postal: _____

NOTE: Please do not include personal information (such as address or phone number) if you object to it being included in the *TC & WM EIS*. Comments received, including contact information, are published in the *TC & WM EIS* in their entirety.
NOTA: Favor de excluir información personal (dirección o número de teléfono) que desea que no aparezcan en el *TC & WM EIS*. Comentarios recibidos, incluyendo la información personal proporcionada, serán publicados en el *TC & WM EIS*.

For more information contact: Mary Beth Burandt, Document Manager,
TC & WM EIS, P.O. Box 1178, Richland, WA 99352
Toll-free Telephone: 1-888-829-6347 • Toll-free Fax: 1-888-785-2865
E-mail: TC&WMEIS@saic.com

81-1 Comment noted.

81-2 Regarding the commentor's concern about the transport of LLW and MLLW from other DOE sites to Hanford for disposal, DOE will be deferring the decision on sending LLW or MLLW from other DOE sites to Hanford for disposal (with some limited specific exceptions), at least until the WTP is operational, subject to appropriate NEPA review. For a more comprehensive discussion on the transport and disposal of offsite waste, see Section 2.1 of this CRD.

81-3 Regarding the status of groundwater contamination and remediation at Hanford, groundwater remediation activities, as required under RCRA, CERCLA, and/or the TPA, are in various stages of assessment, risk-based end-state development, corrective action, and/or active remediation. For a more comprehensive discussion of remediation at Hanford, see Section 2.3 of this CRD.

The accident analysis in this *Final TC & WM EIS* includes accidents triggered by seismic events and discusses potential impacts on site workers and the general public (see Appendix K, Section K.3). For the groundwater analysis, no credit was taken during the analysis for long-term structural stability of the repository or of any of the waste-form containers.

Commentor No. 82: Brian Cladoosby, President, Norma Jean Louie, Secretary, Affiliated Tribes of Northwest Indians of the United States

2010 Winter Conference
Great Wolf Lodge, Grand Mound, WA

RESOLUTION #10 - 02

"TRIBAL INPUT FOR THE 2010 HANFORD CLEAN-UP ENVIRONMENTAL IMPACT STATEMENT"

PREAMBLE

We, the members of the Affiliated Tribes of Northwest Indians of the United States, invoking the divine blessing of the Creator upon our efforts and purposes, in order to preserve for ourselves and our descendants rights secured under Indian Treaties and benefits to which we are entitled under the laws and constitution of the United States and several states, to enlighten the public toward a better understanding of the Indian people, to preserve Indian cultural values, and otherwise promote the welfare of the Indian people, do hereby establish and submit the following resolution:

WHEREAS, the Affiliated Tribes of Northwest Indians (ATNI) are representatives of and advocates for national, regional, and specific tribal concerns; and

WHEREAS, ATNI is a regional organization comprised of American Indians in the states of Washington, Idaho, Oregon, Montana, Nevada, Northern California, and Alaska; and

WHEREAS, the health, safety, welfare, education, economic and employment opportunity, and preservation of cultural and natural resources are primary goals and objectives of ATNI; and

WHEREAS, the U.S. Department of Energy's (DOE) Hanford Nuclear Site, located in southeastern Washington along the Columbia River, contains chemical and radioactive waste that has contaminated our people and our water, air, and land; and

Response side of this page intentionally left blank.

Commentor No. 82 (cont'd): Brian Cladoosby, President, Norma Jean Louie, Secretary, Affiliated Tribes of Northwest Indians of the United States

AFFILIATED TRIBES OF NORTHWEST INDIANS **RESOLUTION #10 - 02**

WHEREAS, the health of the Columbia River and the salmon that spawn in the Hanford Reach are critical to the Indian People; and

WHEREAS, ATNI Member Tribes have invested countless hours and resources fighting to require a faster and more thorough cleanup of the Hanford Site while DOE has disposed of radioactive waste in 149 underground single-shelled tanks, among other places, and many tanks are leaking or have leaked radioactive waste which has in the past and currently is contaminating the groundwater, soil, and plants, and is leaching into the Columbia River; and

WHEREAS, DOE has released a Draft Tank Closure and Waste Management Environmental Impact Statement (EIS) that proposes alternative options on how thoroughly DOE will clean up the nuclear waste and whether to ship additional off-site nuclear waste to Hanford; and

WHEREAS, there is a limited time for influencing DOE's decision and sharing our concerns by the deadline on March 19, 2010 when DOE's decision will influence Tribal resources throughout the Columbia River Basin; and

WHEREAS, DOE is currently making decisions that will guide the cleanup of radioactive and chemical waste for the next fifty years that will affect human health, the environment, and tribal resources for many generations; for example, DOE is deciding whether to remove 90%, 99%, or 99.9% of the radioactive waste from 177 single-shell storage tanks, 67 of which are known or suspected "leakers." Radioactive waste is so long-lived that DOE projects that in the year 5000, 1:1,000 people who use Hanford (e.g. drink groundwater) will die of cancer if 90% of the tank waste is retrieved, and 1 in 100,000 will die of cancer if 99.9% of the tank waste is retrieved, therefore making today's decisions a very long-term impact; and

WHEREAS, DOE is also considering whether or not to clean up the contaminated soil and groundwater beneath the tanks and as part of this EIS, DOE has decided ***not*** to propose cleanup of large trenches that contain radioactive waste that DOE dumped for decades; and

WHEREAS, DOE's preferred alternative is to ship nuclear waste from across the nation to Hanford once the Waste Treatment Plant is operational making Hanford the nation's nuclear waste dump which will increase the exposure and cancer risks of Native Americans in the Pacific Northwest by transporting nuclear waste through Native American reservations on trucks and trains increasing risk of exposure; now

THEREFORE BE IT RESOLVED, that ATNI does hereby recommend that Hanford not be the nation's nuclear waste dump; and

BE IT FURTHER RESOLVED that ATNI recommends that DOE should reject any alternatives that propose shipping more waste to Hanford; and

82-1

82-1 Regarding the commentor's concern about the transport of LLW and MLLW from other DOE sites to Hanford for disposal, DOE will be deferring the decision on sending LLW or MLLW from other DOE sites to Hanford for disposal (with some limited specific exceptions), at least until the WTP is operational, subject to appropriate NEPA review. For a more comprehensive discussion on the transport and disposal of offsite waste, see Section 2.1 of this CRD.

Commentor No. 82 (cont'd): Brian Cladoosby, President, Norma Jean Louie, Secretary, Affiliated Tribes of Northwest Indians of the United States

AFFILIATED TRIBES OF NORTHWEST INDIANS **RESOLUTION #10 - 02**

BE IT FURTHER RESOLVED that ATNI supports the principle of "cleanup first;" and *82-2*

BE IT FURTHER RESOLVED, that, when making decisions, the risk of exposure to Native Americans should be projected by the Tribes themselves, not DOE's exposure scenarios because Tribes are in the best position to judge the exposure of risk; and *82-3*

BE IT FURTHER RESOLVED, that ATNI demands the DOE choose the most aggressive plan possible to contain and treat radioactive and chemical wastes at Hanford with the goal of making the entire area safe for traditional uses; and

BE IT FURTHER RESOLVED, that ATNI demands DOE should remove and treat as much waste contained in the single-shelled tanks as possible with the goal of reaching 99.9%; and *82-4*

BE IT FURTHER RESOLVED, that ATNI demands DOE should immediately develop plans to clean up the million gallons of radioactive waste that has already leaked from the storage tanks and completely treat all of the leaked waste and evaluate and treat miles of unlined ditches and trenches containing nuclear waste that DOE currently has no plans to clean up; and *82-5*

BE IT FURTHER RESOLVED, that ATNI demands DOE should ensure that the Waste Treatment Plant create ultra-stable waste forms that are "good as glass," and DOE should reject all less stable treatment systems; and *82-6*

BE IT FINALLY RESOLVED, that ATNI demand DOE select cleanup plans that protect the health of all people today and for future generations.

CERTIFICATION

The foregoing resolution was adopted at the 2010 Winter Conference of the Affiliated Tribes of Northwest Indians, held at the Great Wolf Lodge, Grand Mound, Washington, February 8 - 11, 2010 with a quorum present.

Brian Cladoosby
Brian Cladoosby, President

Norma Jean Louie
Norma Jean Louie, Secretary

82-2 Comment noted.

82-3 The intent of the American Indian scenarios was to collectively reflect American Indian lifestyles for the purpose of comparison. It was never the intent to analyze all possible American Indian scenarios.

82-4 Regarding the status of groundwater contamination and remediation at Hanford, groundwater remediation activities, as required under RCRA, CERCLA, and/or the TPA, are in various stages of assessment, risk-based end-state development, corrective action, and/or active remediation. For a more comprehensive discussion of remediation at Hanford, see Section 2.3 of this CRD.

The impacts of different levels of tank waste retrieval and of different types of SST system closure are addressed in the *TC & WM EIS* analyses. These include Tank Closure Alternatives 4, 6A, and 6B, which evaluate 99.9 percent retrieval of the tank waste and clean closure of all or part of the SST system. Decisions made by DOE on the proposed actions will be based on a number of factors, including health and safety, environmental, economic, and technical considerations; agency statutory missions; and national policy considerations. The decisions on the selected course of action and supporting rationale will be documented in a ROD issued no sooner than 30 days after the EPA Notice of Availability for this *Final TC & WM EIS* is published in the *Federal Register*.

82-5 As analyzed in this *TC & WM EIS*, 67 of the 149 SSTs at Hanford are known or suspected to have leaked liquid waste to the environment between the 1950s and the present. Estimates of the total leak loss from the 67 SSTs range from less than 2.8 million to as much as 3.97 million liters (750,000 to 1,050,000 gallons), some of which has reached the groundwater. DOE recognizes that groundwater contamination from past leaks is a concern at Hanford. One of the purposes of this *TC & WM EIS* is to analyze potential impacts of DOE's proposed actions to retrieve waste from the buried tanks, treat and dispose of this waste, and close the SST farms by landfill closure, selective clean closure, or clean closure. This analysis is also intended to aid DOE in making decisions regarding cleanup of the past leaks, including remediation of the contamination in the vadose zone.

Since 2004, DOE has buried all LLW in lined trenches (see Appendix E, Section E.3.3, of this EIS for the evolution of past disposal practices). DOE continues to strictly limit the amount of waste that Hanford can accept and ensures that disposal activities are protective of the environment and meet regulatory requirements. Previous use of unlined trenches for disposal was a

Commentor No. 82 (cont'd): Brian Cladoosby, President, Norma Jean Louie, Secretary, Affiliated Tribes of Northwest Indians of the United States

big concern to stakeholders and Washington and Oregon States; DOE heard and addressed those concerns and is using lined trenches.

82-6 Vitrification of radioactive waste into glass is an attractive option because it atomistically bonds the species in a solid glassy matrix. Because radioactive constituents are bonded within the glass structure, the waste forms produced are very durable and environmentally stable over long time durations; however, they remain toxic. EPA has declared vitrification the best-demonstrated available technology for HLW disposal.

See response to comment 82-4 regarding future DOE decisions.

Commentor No. 83: H.T. Bernstein

TC &WM EIS
P.O. Bx 1178
Richmond, WA 99352

February 21, 2010

Dear Sirs,

It is not in the national interest to concentrate all radioactive dumping in one spot. Apart from the burden of guarding hazardous wastes for generations against not only terrorist activity but innocent civilian contact, a single location generates multiple and long transport routes for new waste. *83-1*

It is unfair to impose on the people of the State of Washington, especially those American Indian tribes and others who live in the vicinity of Hanford, the entire health risk of a single national dump. *83-2*

If the further development of nuclear electricity generation, in order to preclude the generation of carbon dioxide emissions, irrespective of higher costs and the dilemma of entombment guarded for thousand of years after end of useful life of plant, is so much in the national interest as to outweigh its disadvantages, the whole country ought to participate in the burdens of waste disposal, not dump them all on Hanford. and the people of Washington State.alone *83-3*

It is poor public policy to exaccerbate conditions in one place before cleaning up existing messes. Before adding further to radioactive hazards at Hanford, leaky barrels of waste should be removed from unlined trenches, transfer the remainder of high-level waste from leaking single walled containers to double ones, and above all prevent radioactive waste from contaminating the ground water that seeps into the Columbia River. This is a great American river affecting millions of people.Just one consequence of contamination would be to spoil the salmon fishery, which would spread out from the mouth of the Columbia along the west coast of America. *83-4*

It is in the national interest to clean up Hanford, not expand it as the radioactive dump for the entire United States. *83-5*

Sincerely,

H.T. Bernstein

H.T. Bernstein
3439 NW 62nd Street
Seattle, WA 98107

83-1 Regarding the commentor's concern about the transport of LLW and MLLW from other DOE sites to Hanford for disposal, DOE will be deferring the decision on sending LLW or MLLW from other DOE sites to Hanford for disposal (with some limited specific exceptions), at least until the WTP is operational, subject to appropriate NEPA review. For a more comprehensive discussion on the transport and disposal of offsite waste, see Section 2.1 of this CRD.

The impacts of the offsite waste in terms of radiological risk are presented in the Summary, Section S.5.5.3, and Chapter 2, Section 2.10, Key Environmental Findings. These sections discuss the radiological risk differences between including and not including offsite waste disposal at IDF-East.

The *TC & WM EIS* analysis shows that receipt of offsite waste streams that contain specific amounts of certain isotopes, specifically, iodine-129 and technetium-99, could cause an adverse impact on the environment. Therefore, one means of mitigating this impact would be for DOE to limit disposal of offsite waste streams at Hanford. Other mitigation measures, such as recycling secondary-waste streams into the primary-waste-stream feeds within the WTP to increase iodine-129 capture in ILAW and bulk vitrification glass, are discussed in Chapter 7, Section 7.5, of this final EIS.

The commentor is also referred to Appendix H, Section H.7, for the results of the transportation risk analysis and Section H.6.6 for a discussion on potential acts of sabotage or terrorism.

83-2 This EIS addresses the environmental impacts of retrieval, treatment, and disposal of tank waste and final closure of the SST system. It also evaluates the impacts of FFTF decommissioning, including management of waste generated by the decommissioning process. Finally, this *TC & WM EIS* evaluates the potential environmental impacts of ongoing solid-waste management operations at Hanford, as well as the proposed disposal of Hanford LLW and MLLW and a limited volume of offsite LLW and MLLW.

See response to comment 83-1 for a discussion on the transport and disposal of offsite waste.

83-3 Nuclear energy production is not within the scope of this *TC & WM EIS*. Regarding the safe disposal of waste generated from nuclear energy production, the current Administration has established a Blue Ribbon Commission on America's Nuclear Future that has issued a report and recommendations for a path forward for managing the country's HLW. DOE's decisions regarding

Commentor No. 83 (cont'd): H.T. Bernstein

management of Hanford waste will be consistent with Administration policies. For a more comprehensive discussion of this topic, see Section 2.10 of this CRD.

83-4 Regarding the status of groundwater contamination and remediation at Hanford, groundwater remediation activities, as required under RCRA, CERCLA, and/or the TPA, are in various stages of assessment, risk-based end-state development, corrective action, and/or active remediation. For a more comprehensive discussion of remediation at Hanford, see Section 2.3 of this CRD.

This *TC & WM EIS* provides a detailed description of the SST system in Appendix E, Section E.1.1.1.1, Tank Farm Facilities. SST activities under way include planning the sequence for transferring waste currently stored in the DSTs to the WTP and retrieving and transferring waste from the SSTs to the DST system for eventual treatment. Section E.1.1.1.1 describes the technologies, facilities, assumptions, and uncertainties associated with options for retrieval of waste from SSTs and transfer to DSTs. Contingency planning for potential additional tank leaks is discussed in Section E.1.1.1.2. This section provides some insight into Hanford's tank farm operations, maintenance, surveillance and monitoring, and safety programs that DOE has instituted to ensure that, if new tank leaks develop, they do not affect the environment.

83-5 See response to comment 83-1 for a discussion on the transport and disposal of offsite waste.

In general, the scope of this *TC & WM EIS* does not include groundwater remediation activity as part of the proposed actions evaluated. However, DOE is implementing an extensive, ongoing cleanup program at Hanford, as required under RCRA, CERCLA, and/or the TPA, a legal agreement between DOE, Ecology, and EPA. The TPA identifies cleanup actions and schedules, called milestones. The TPA agencies completed negotiations on several Hanford cleanup projects, including the establishment of 29 additional and/or accelerated groundwater and Columbia River protection milestones and target dates.

Commentor Number 84 is not included in this Comment-Response Document because it is a duplicate of Commentor Number 73.

Commentor No. 85: Emma Amiad

From: Emma Amiad [eamiad@vashonislandrealestate.com]
Sent: Friday, February 26, 2010 5:54 PM
To: tc&wmeis@saic.com
Subject: Hanford

I would appreciate my comments being considered as you move forward at Hanford. I simply cannot believe there would be any further consideration of this site for toxic waste disposal. The Columbia river is vital for agriculture, drinking water, and wildlife in Washington state and must be protected. The ground water contamination alone is enough to keep us awake at night. Hanford should be cleaned up! But instead there is this plan to go back to dumping there. This must stop! *85-1* *85-2*

Emma Amiad

Vashon Island, Washington

85-1 In general, the scope of this *TC & WM EIS* does not include groundwater remediation activity as part of the proposed actions evaluated. DOE is implementing an extensive, ongoing cleanup program at Hanford, as required under RCRA, CERCLA, and/or the TPA, a legal agreement between DOE, Ecology, and EPA. The TPA identifies cleanup actions and schedules, called milestones. The TPA agencies completed negotiations on several Hanford cleanup projects, including the establishment of 29 additional and/or accelerated groundwater and Columbia River protection milestones and target dates.

All comments made during the public comment period, whether given orally at hearings or sent via mail or email, were considered equally by DOE. All comments received on the *Draft TC & WM EIS* and their approved responses are included in this CRD, a volume of this *Final TC & WM EIS*. DOE has posted this final EIS, including this CRD, on the Hanford website (http://www.hanford.gov) and on the DOE NEPA website (http://energy.gov/nepa), and a Notice of Availability will be published in the *Federal Register*. Decisions made by DOE on the proposed actions will be based on a number of factors, including health and safety, environmental, economic, and technical considerations; agency statutory missions; and national policy considerations. The decisions on the selected course of action and supporting rationale will be documented in a ROD issued no sooner than 30 days after the EPA Notice of Availability for this *Final TC & WM EIS* is published in the *Federal Register*.

85-2 Regarding the status of groundwater contamination and remediation at Hanford, groundwater remediation activities, as required under RCRA, CERCLA, and/or the TPA, are in various stages of assessment, risk-based end-state development, corrective action, and/or active remediation. For a more comprehensive discussion of remediation at Hanford, see Section 2.3 of this CRD.

Commentor No. 86: Tim Calvert

From: Tim Calvert [tcalvert@pcez.com]
Sent: Sunday, February 28, 2010 1:41 PM
To: tc&wmeis@saic.com
Subject: Clean up the poison at Hanford

The disaster that is Hanford is criminal. No more waste, clean it up, stop attacking the people of the Northwest. Sincerely Tim Calvert. *86-1*

86-1 Although not within the scope of this *TC & WM EIS*, DOE is implementing an extensive, ongoing cleanup program at Hanford, as required under RCRA, CERCLA, and/or the TPA, a legal agreement between DOE, Ecology, and EPA. The TPA identifies cleanup actions and schedules, called milestones. The TPA agencies completed negotiations on several Hanford cleanup projects, including the establishment of 29 additional and/or accelerated groundwater and Columbia River protection milestones and target dates.

Commentor No. 87: Steve Shaiman

From: Steve Shaiman [steve@shaiman.net]
Sent: Sunday, February 28, 2010 5:53 PM
To: tc&wmeis@saic.com
Subject: Clean Up Hanford Before Expanding

If Hanford's role, serving as a dumping ground for radioactive waste must be expanded, the existing conditions must be addressed first. There is no going back later to clean it up. If this can't be done first, just dump the new waste directly in the Columbia and be done with it. The long-term results will be the same either way.

How can never cleaning up the million gallons of waste leaked from High-Level Nuclear Waste tanks be an option.

What about the unlined soil trenches filled with highly radioactive wastes?

Both are causing massive contamination to flow toward the Columbia River. *87-1*

Spending money for more dumping without first spending the money to deal with these problems, only promises even more problems to compound the existing conditions.

Unless the plan includes a plan to force evacuation and sealing off 100s, if not 1000s of square miles of land around Hanford and along the Columbia river, not cleaning up the existing conditions first makes no sense. *87-2*

Regards,

Steve Shaiman
4334 NE 43rd St
Seattle, WA 98105

87-1 Regarding the commentor's concern about the transport of LLW and MLLW from other DOE sites to Hanford for disposal, DOE will be deferring the decision on sending LLW or MLLW from other DOE sites to Hanford for disposal (with some limited specific exceptions), at least until the WTP is operational, subject to appropriate NEPA review. For a more comprehensive discussion on the transport and disposal of offsite waste, see Section 2.1 of this CRD.

DOE is implementing an extensive, ongoing cleanup program at Hanford, as required under RCRA, CERCLA, and/or the TPA, a legal agreement between DOE, Ecology, and EPA. The TPA identifies cleanup actions and schedules, called milestones. The TPA agencies completed negotiations on several Hanford cleanup projects, including the establishment of 29 additional and/or accelerated groundwater and Columbia River protection milestones and target dates. While this *TC & WM EIS* does not address remediation of contaminated groundwater, groundwater contamination resulting from past tank leaks is currently being evaluated under the RCRA Facility Investigation/Corrective Measures Study process. Disposal of LLW in unlined trenches within Hanford's LLBG 218-W-5 ceased in 2004, as described in Chapter 3, Section 3.2.12.1.4, of this EIS. Closure of these CERCLA past-practice units is outside the scope of this EIS. These LLBGs are included in a draft Remedial Investigation/Feasibility Study work plan that outlines possible characterization and remediation activities for specified landfills on the site. However, the contribution of past waste disposal in the burial grounds to contamination of the vadose zone and groundwater is included in the cumulative impacts analysis presented in Chapter 6 of this EIS.

Under the Waste Management alternatives evaluated in this *TC & WM EIS*, onsite-generated, non-CERCLA, nontank LLW and MLLW would continue to be disposed of in the "lined" trenches 31 and 34 in LLBG 218-W-5. As presented in Chapter 4, Section 4.3, and Chapter 5, Section 5.3, of this EIS and summarized in the Summary, the potential short-term impacts of disposal operations would be negligible, and the long-term groundwater and human health analyses indicate that it would be safe to continue disposal of LLW and MLLW in these "lined" trenches.

87-2 Regarding the status of groundwater contamination and remediation at Hanford, groundwater remediation activities, as required under RCRA, CERCLA, and/or the TPA, are in various stages of assessment, risk-based end-state development, corrective action, and/or active remediation. For a more comprehensive discussion of remediation at Hanford, see Section 2.3 of this CRD.

Commentor No. 88: Edward Fredenburg, Washington State Department of Ecology

From: Fredenburg, Edward (ECY) [mailto:Efre461@ecy.wa.gov]
Sent: Wednesday, January 13, 2010 3:21 PM
To: Burandt, Mary E
Cc: Eberlein, Elis (ECY); Dahl-crumpler, Suzanne L; McDonald, Dan (ECY)
Subject: RE: errors in EIS

Another possible error:

Comparing chromium releases to VZ (Appendix M) vs. releases to GW (Appendix N) for the Waste Management alternatives, it generally appears that for tank closure alternatives 2B, 3A, 3B, and 3C the amount of chromium reaching groundwater is the same or slightly less than the amount released to the vadose zone. The one exception is for tank closure alternative 3B. Figure M-53 shows approximately 400,000 kg released to the vadose zone. Figure N-92 shows that only about 1/10 that amount reaches groundwater. Either there is an order or magnitude error somewhere, or the transport properties of chromium atoms in the vadose zone are somehow different if the source is cast stone vs. ILAW, bulk vit, or steam reforming product. *88-1*

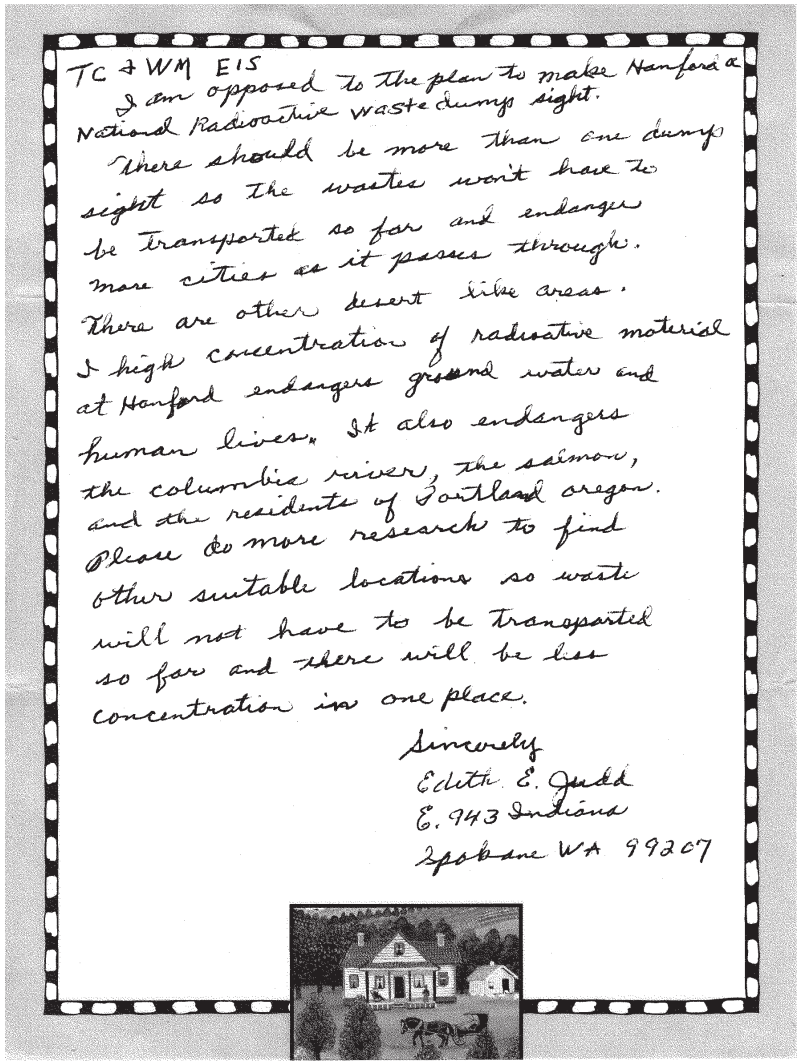
p.s. How is Charles doing on providing values for the bars in Appendix M and N? Elis Eberlein also needs the information. I'll be gone effectively by the end of today, so if you or Charles provide the requested values by email, please copy Elis on the email.

Thanks,

Ed

88-1 There was an error in the entry for chromium in Figure N–92 in the *Draft TC & WM EIS*. That error has been corrected in Figure N–133 of this *Final TC & WM EIS*.

Commentor No. 89: Edith E. Judd



TC & WM EIS
I am opposed to the plan to make Hanford a National Radioactive waste dump sight.
There should be more than one dump sight so the wastes won't have to be transported so far and endanger more cities as it passes through.
There are other desert like areas.
A high concentration of radioactive material at Hanford endangers ground water and human lives. It also endangers the columbia river, the salmon, and the residents of Portland oregon.
Please do more research to find other suitable locations so waste will not have to be transported so far and there will be less concentration in one place.

Sincerely
Edith E. Judd
E. 943 Indiana
Spokane WA 99207

89-1

89-2

89-1 cont'd

89-1 Regarding the commentor's concern about the transport of LLW and MLLW from other DOE sites to Hanford for disposal, DOE will be deferring the decision on sending LLW or MLLW from other DOE sites to Hanford for disposal (with some limited specific exceptions), at least until the WTP is operational, subject to appropriate NEPA review. For a more comprehensive discussion on the transport and disposal of offsite waste, see Section 2.1 of this CRD.

89-2 Regarding the status of groundwater contamination and remediation at Hanford, groundwater remediation activities, as required under RCRA, CERCLA, and/or the TPA, are in various stages of assessment, risk-based end-state development, corrective action, and/or active remediation. For a more comprehensive discussion of remediation at Hanford, see Section 2.3 of this CRD.

Commentor No. 90: Janice Milani

February 23, 2010

Mary Beth Burandt, Document Manager
USDOE, Office of River Protection
P.O. Box 1178
Richland, WA 99352

Dear Ms. Burandt,

I am writing to you with three concerns about the aging Hanford nuclear plant--specifically, (1) cleanup from the leaking storage tanks, (2) wastes that have already leaked, and (3) the proposal to ship radioactive wastes from across the United States to Hanford.

I would like to say that I strongly oppose transporting any radioactive wastes across the country to Hanford, or for that matter, anywhere else. There is the strong possibility of spills or accidents during any phase of this, endangering peoples' lives through long-term soil and water contamination. No matter how careful humans are, there are always mistakes and accidents. Also, self-styled terrorists could try to hijack some of this material. There are mentally unstable people who would see this as an opportunity for whatever ends they have in mind. *90-1*

Also, I believe that all of the existing 55 million gallons of buried waste at Hanford need to be removed, with a 99.9% retrieval, and that the radioactive wastes that have already leaked from corroding holding tanks and are getting nearer and nearer to the Columbia River, should be cleaned up. *90-2*

I am sure you are aware that the Columbia River is one of the Northwest's major transportation highways, powers a series of dams, and is also a source of food to people who fish its waters. In addition, the Columbia is near drinking water wells that are used in summer by the city of Portland. And Portland is by far the largest urban area in Oregon, making the possibility of contamination able to affect a great many people. *90-1 cont'd*

In view of all these very real dangers, I hope you will use your influence to stop any transportation of nuclear wastes to Hanford and will recommend a thorough cleanup of all of the wastes.

Thank you very much for listening.

Sincerely,

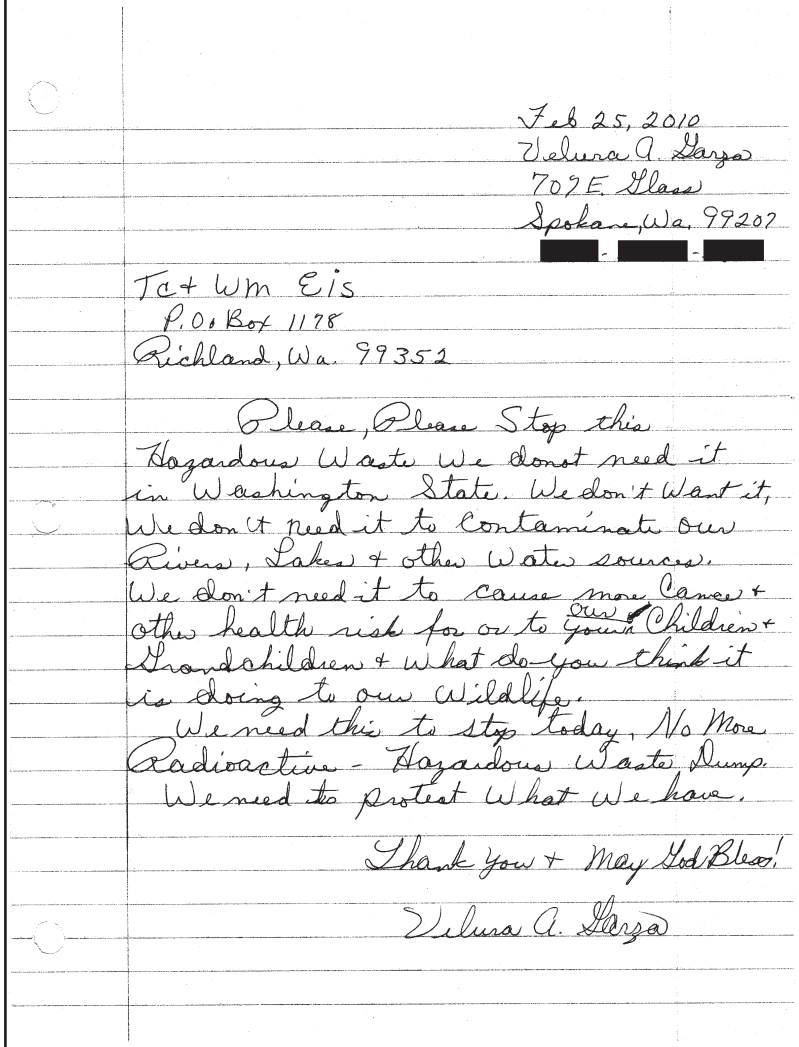
Janice Milani

Janice Milani
323 S.E. 55th Ave.
Portland, OR 97215

90-1 Regarding the commentor's concern about the transport of LLW and MLLW from other DOE sites to Hanford for disposal, DOE will be deferring the decision on sending LLW or MLLW from other DOE sites to Hanford for disposal (with some limited specific exceptions), at least until the WTP is operational, subject to appropriate NEPA review. For a more comprehensive discussion on the transport and disposal of offsite waste, see Section 2.1 of this CRD.

90-2 The impacts of different levels of tank waste retrieval and of different types of SST system closure are addressed in the *TC & WM EIS* analyses. These include Tank Closure Alternatives 6A and 6B, which evaluate 99.9 percent retrieval of the tank waste and clean closure of the SST system. Decisions made by DOE on the proposed actions will be based on a number of factors, including health and safety, environmental, economic, and technical considerations; agency statutory missions; and national policy considerations. The decisions on the selected course of action and supporting rationale will be documented in a ROD issued no sooner than 30 days after the EPA Notice of Availability for this *Final TC & WM EIS* is published in the *Federal Register*.

Commentor No. 91: Velura A. Garza



Feb 25, 2010
Velura A. Garza
707 E. Glass
Spokane, Wa. 99207
[redacted]

Tc+ Wm Eis
P.O. Box 1178
Richland, Wa. 99352

Please, Please Stop this
Hazardous Waste We donot need it
in Washington State. We don't Want it,
We don't need it to Contaminate our
Rivers, Lakes + other Water sources.
We don't need it to cause more Cancer +
other health risk for our to Your Children +
Grandchildren + What do you think it
is doing to our Wildlife.
We need this to stop today, No More
Radioactive - Hazardous Waste Dump.
We need to protest What we have.

Thank you + May God Bless!

Velura A. Garza

91-1

91-1 The purpose of this *TC & WM EIS* is to analyze the potential impacts of DOE's proposed actions to retrieve and treat the Hanford tank waste; close the Hanford SST system; store and/or dispose of the waste generated from these tank waste activities; decommission FFTF; and expand or upgrade waste management capabilities to support ongoing and planned waste management activities for on- and offsite waste to facilitate cleanup at Hanford and other DOE sites. In general, the scope of this *TC & WM EIS* does not include groundwater remediation activity as part of the proposed actions evaluated. However, DOE is implementing an extensive, ongoing cleanup program at Hanford, as required under RCRA, CERCLA, and/or the TPA, a legal agreement between DOE, Ecology, and EPA. The TPA identifies cleanup actions and schedules, called milestones. The TPA agencies completed negotiations on several Hanford cleanup projects, including the establishment of 29 additional and/or accelerated groundwater and Columbia River protection milestones and target dates.

Commentor No. 92: Jeff White

-------- Original Message --------
Subject: Hanford toxic waste
Date: Mon, 01 Mar 2010 15:22:54 -0800
From: Jeff White <JWhiteCIN@comcast.net>
To:TCY&WMEIS@saic.com

To: Mary Beth Burandt, NEPA Document Manager, U.S. Dept.of Energy,
Office of River Protection
ATTN: TC & WM EIS, POB 1178 Richland, WA 99352

I completely agree with the following proposition:

1. speed the clean-up of nuclear and toxic waste at Hanford that is contaminating the COLUMBIA RIVER - DON'T DELAY CLEAN-UP! *92-1*

2. prevent further offsite waste shipments to Hanford that would require moving toxic waste through Oregon highways. *92-2*

I understand that we have energy problems that will likely require a drastic change of lifestyle.
My family and I are willing to undergo hardship to avoid further damage and contamination
of the planet.
We choose to Protect the environment, and invest in our future.

Jeff White
2966 Norkenzie Rd.
Eugene, OR 97408

[redacted]

1 of 1 3/1/2010 4:03 PM

92-1 Regarding the status of groundwater contamination and remediation at Hanford, groundwater remediation activities, as required under RCRA, CERCLA, and/or the TPA, are in various stages of assessment, risk-based end-state development, corrective action, and/or active remediation. For a more comprehensive discussion of remediation at Hanford, see Section 2.3 of this CRD.

92-2 Regarding the commentor's concern about the transport of LLW and MLLW from other DOE sites to Hanford for disposal, DOE will be deferring the decision on sending LLW or MLLW from other DOE sites to Hanford for disposal (with some limited specific exceptions), at least until the WTP is operational, subject to appropriate NEPA review. For a more comprehensive discussion on the transport and disposal of offsite waste, see Section 2.1 of this CRD.

Commentor No. 93: Arun N. Toké

From: Arun Toke [editor@SkippingStones.org]
Sent: Monday, March 01, 2010 8:07 PM
To: tc&wmeis@saic.com
Cc: office@hoanw.org
Subject: Hanford Waste Cleanup and its potential threat to our environment

RE: Tank Closure & Waste Management EIS Hearings

Dear DOE Officials

Greetings.

Since I am unable to come to the public hearing this evening, I wanted to send you my concerns and comments regarding Hanford for the record.

I would like to see a speedy clean-up of nuclear and toxic waste at Hanford that is contaminating the COLUMBIA RIVER - PLEASE DO NOT DELAY CLEAN-UP TASK!

Hanford is located too close to the Columbia River. How could you all have not taken in to consideration the future pollution that it will cause and impact on this site on the important waterway? For many years it produced plutonium for nuclear weapons, leaving major nuclear and chemical pollution, some of which is a possible long-term threat to the river. Every now and then I have read reports in the newspapers about leakages from Hanford. And, as a former electrical engineer, I feel that somehow, the siting and construction must have been flawed. *93-1*

I am surprised to learn that the DOE spends around $2 billion per year.

I hope you will advise the President to not invest in Nuclear energy until the waste issues are fully and satisfactorily resolved. *93-2*

Thank you for seeking our input.

arun
Arun N. Toké, Editor
Skipping Stones Magazine
P.O. Box 3939
Eugene, OR 97403 USA

TEL. xxx-xxx-xxxx

email: editor@SkippingStones.org
website: www.SkippingStones.org

Celebrating Our 22nd year!
WINNER, 2007 NAME AWARD

93-1 Possible long-term threats to the river are analyzed in Chapter 5 of this *TC & WM EIS*. The long-term impacts analysis results for groundwater, human health, and ecological risk were derived from modeling releases (including leakages) of waste to air and groundwater. These impacts were analyzed out to 10,000 years in the future.

93-2 One of the purposes of this *TC & WM EIS* is to analyze the range of reasonable alternatives to safely retrieve and treat radioactive, hazardous, and mixed waste from the Hanford tank systems; close the SST system; and store and/or dispose of the waste generated from these activities at Hanford. National policies addressing commercial nuclear power generation and management of associated wastes are beyond the scope of this EIS.

Commentor No. 94: Justin Pearce, City Council, City of Pendleton, Oregon

From: Pearce, Justin (Pendleton) [JustinPearce@chiwest.com]
Sent: Tuesday, March 02, 2010 8:27 PM
To: ken.niles@state.or.us; tc&wmeis@saic.com
Subject: More info on Draft Tank Closure & Waste Managment EIS

Ken,

I am trying to understand the entire situation as best as I can regarding the liquid waste from Hanford. What is clear is that its vicinity to a massive river system such as the Columbia has the potential to affect a very large area, ecologically and geographically. I would hope, despite the costs, that retrieving the tanks is the most likely option. Does that seem to be the consensus? What would we do with the waste then? *94-1*

With landfill closure of all the tanks, what does that entail?

I am less concerned about the FFTF but obviously, continued nuclear waste processing at this site concerns me, as states as a possibility after 2022. *94-2*

Do you have more information, in a pdf that I can read. What is the best solution in your opinion and what is likely to happen, if you were to guess? *94-3*

Thanks for your time,

Justin Pearce
City of Pendleton, City Council

Justin J. Pearce JD MBA
Practice Manager, St. Anthony Hospital, CHI
justinpearce@chiwest.com
xxx.xxx.xxxx

94-1 The purpose of this *TC & WM EIS* is to analyze potential impacts of DOE's proposed actions to retrieve and treat the Hanford tank waste; close the Hanford SST system; store and/or dispose of the waste generated from these tank waste activities; decommission FFTF; and expand or upgrade waste management capabilities to support ongoing and planned waste management activities for on- and offsite waste to facilitate cleanup at Hanford and other DOE sites. Decisions made by DOE on the proposed actions will be based on a number of factors, including health and safety, environmental, economic, and technical considerations; agency statutory missions; and national policy considerations. The decisions on the selected course of action and supporting rationale will be documented in a ROD issued no sooner than 30 days after the EPA Notice of Availability for this *Final TC & WM EIS* is published in the *Federal Register*.

94-2 DOE is convinced that processing the tank waste in the WTP is the best path forward for stabilizing this waste and reducing potential impacts on the environment. As with any treatment process, there are risks; however, DOE is working diligently to mitigate such risks while completing the mission. To be clear, FFTF is not currently processing nuclear waste and will not do so in the future.

94-3 DOE mailed copies of the *Draft TC & WM EIS* to all individuals who requested one. For those individuals who requested only a printed copy of the Summary, a CD that contained the complete draft EIS and a Reader's Guide was attached to the inside cover. Project information is also available to the public on Hanfords's website (http://www.hanford.gov). The commentor is referred to Chapter 2, Section 2.12, for a discussion of DOE's Preferred Alternatives for tank closure, FFTF decommissioning, and waste management. See response to comment 94-1 for information on the NEPA decisionmaking process.

Commentor No. 95: Marsie Martien

From: Marsie Martien [mmartien@gmail.com]
Sent: Tuesday, March 02, 2010 4:23 PM
To: tc&wmeis@saic.com
Subject: Hanford Waste Dump

Clean-up the Hanford site completely first before bringing more waste.

remove the tanks and clean the soil. DO NOT make Hanford a national nuclear dump site!

Marsie Martien
3001 SE Kelly St.
Portland, OR 97202

95-1

95-1 Regarding the status of groundwater contamination and remediation at Hanford, groundwater remediation activities, as required under RCRA, CERCLA, and/or the TPA, are in various stages of assessment, risk-based end-state development, corrective action, and/or active remediation. For a more comprehensive discussion of remediation at Hanford, see Section 2.3 of this CRD.

Commentor No. 96: James Bruvold

From: Jim Bruvold [jbruvold@efn.org]
Sent: Thursday, February 25, 2010 3:59 PM
To: Mary Beth Burandt
Subject: Geologic Isolation of Tank Wastes

Mary Beth Burandt, Document Manager
Office of River Protection
U.S. Department of Energy
Environmental Management Division
Richland, WA 99352

Dear Ms. Burandt,

Is there someone in the ORP who would be interested in discussing with me an idea to geologically isolate radioactive pollution using fungal mycelium? Use fungus to sequester and bind pollution to soil particles, and thus reduce aquatic transport into the Columbia River. The idea is to inject cultured microfauna into the vadoze zone beneath the seeping waste tanks, where they will reproduce and continue to grow on their own. *96-1*

There is a red fungus growing on the concrete walls of the Chernobyl reactor building in an environment of 10,000 Rads/hr. Apparently they rely upon radioactive disintegration energy for their life source.
There very well may be similar fungus growing in the vadoze zone beneath the leaking tanks that could be extracted and cultivated in a heterogeneous environment and then re-injected without un-intended consequences to the groundwater table.

My proposal is to culture fungus in a composted medium using a process I have designed. This process converts and separates metals and plastics from compost derived from raw city garbage and wastewater treatment sludge, on a scale of hundreds of tons per day. The municipal wastes generated in the Tri-Cities area could be used to help clean up the Hanford Site over the next 30 to 40 years. A large class of fungi overcome the difficulties encountered in such environments by the method of translocation which results in the internal redistribution of nutrients within the fungal mycelium. There is strong experimental evidence that diffusion is the dominant mechanism for translocation in heterogeneous environments. Diffusion is vital for exploration, i.e. the expansion of the fungal network into the surrounding area.

96-1 As discussed in Chapter 2, Section 2.6, of this *TC & WM EIS*, a number of technologies, including in situ soil remediation, were considered but not selected for detailed analysis in this *TC & WM EIS*. In situ soil remediation technologies were not evaluated in detail because of the difficulties and uncertainties associated with placement of treatment zones and their performance verification. In situ treatment also generally requires long periods of time and presents concerns about uniformity of treatment because of the variability in soil and aquifer characteristics.

Commentor No. 96 (cont'd): James Bruvold

Environmental heterogeneity has a strong influence on growth and function according to researchers at University of Dundee, U.K.

Sequestering nuclear wastes with mycelium my show to be a viable, cost effective method for cleaning up a very difficult situation.

Thank you for your consideration.

Respectfully,

James Bruvold, PE
Consulting Engineer
Energy and Environmental Sciences, LLC
88059-5th Street #2, P.O.Box 578
Veneta, OR 97487-0578
xxx-xxx-xxxx
jbruvold@efn.org

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Commentor No. 97: Matt Switzer

From: matt switzer [mattiswitz@gmail.com]
Sent: Tuesday, March 02, 2010 7:02 AM
To: tc&wmeis@saic.com
Subject: 3/1/2010

.9%-

Writing is hardly the optimal tool for expressing passion and emotioninstead, it functions best as a medium for conveying logic. Yet either are sufficient reasons to care about or respond to one basic point of Truth: life on earth is under attack. Whether or not we have come to be desensitized to this fact does not justify poisoning the web of life or contributing to the death of countless human beings. To confront this recently discovered reality of suicidal proportion, new democratic devices are needed for constructing the solutions that will prove commensurate with the problems faced today.

The recognition that all life is Sacred should prompt us to reconsider the lethal direction in which we are headed. It has indeed surpassed mere importance to educate ourselves fully on the complexities of the system we despise, to stage powwows and teach-ins that disperse and decentralize completely this knowledge we have accumulated. Rather, there has become a fundamental barrier in our Collective Psyche preventing us from taking full responsibility to the extent we should commit ourselves in our opposition to inadequate initiatives and impact statements. We can no longer be asked to trust the outside control of those in sanctioned offices of authority to provide us with a lifestyle dignifying civilization, for it will always be shortchanged without personalized determination.

Revitalization, the need for Self-rule and indisputable sovereignty, is required to eliminate violations of accepted social norms, i.e. the Public Trust Doctrine. Unfortunately the public is still mostly ignorant to these issues despite living in an information age and therefore the reform of education and the rebuilding of justice systems will be critical components to alleviating the grievances prevalent in this system of bureaucratic insanity. A critical mass, a group of people coming together from different backgrounds with different theories must be orchestrated to produce a stable, responsive, capable, integrated resource management plan, legitimately concerned about our investment in the future. In describing how best to reconsider responses to issues bearing most significance for Native peoples, Charles Wilkinson offers, The best outcomes will be inspired by Indian people themselves and carried out by their own institutions. (Wilkinson 2005)

97-1	**97-1**	Comment noted.

Commentor No. 97 (cont'd): Matt Switzer

Will we seek to entomb our most callous mistakes of the past, repressing our historical traumas even as its toxicity seeps into our unconscious; or will we take the lesson of today, the urgency of Now, and apply it to the larger picture? We must teach each other by doing and being what is right, while including ourselves in a cross-generational commitment to the ideal of Ultimate good. But this radical assembly cannot merely be just for showpower must shift from institutions of hierarchy to the collaborative human effort oriented towards a common purpose, namely its own sustainability. We must let the children speak for themselves while aiding and enforcing their engagement with the natural world. If we can do but one single thing for those who have been and will continue to be most affected by these decisions of highest priority, it will be to believe that rage can and will in fact educate and motivate us to assess the risks and cure ourselves of the greatest war crimes perpetrated of all time. Only then can the potential power of our collective intellect save us from the destruction of unforeseen prejudice, constructing a vessel of cultural regeneration much like our ancestors who, together, fashioned the canoes that saved them from the rising waters of certain death:

97-1 cont'd

The canoe is a metaphor for community; in the canoe, as in any community, everyone must work togetherall facets of the contemporary canoe experienceplanning, building, fund-raising, travelingcombine to make our communities strong and vital in the old ways. (Neel 1995)

Wilkinson, Charles. (2005) Blood Struggle: The Rise of Modern Indian Nations. W.W. Norton & Co: New York

Neel, David. (1995) The Great Canoes: Reviving a Northwest Coast Tradition. University of Washington Press

Response side of this page intentionally left blank.

Comment Documents 98 through 109 are found in the Richland, Washington, and Boise, Idaho, public meeting transcripts. These transcripts can be found in the second book of this Comment-Response Document (all campaigns and public meeting transcripts).

Commentor No. 110: Amy Pincus Merwin

From: Amy Pincus Merwin [amy@informproductions.com]
Sent: Wednesday, March 03, 2010 8:57 PM
To: tc&wmeis@saic.com
Subject: Please, no more nuclear storage, dumping or transporting of nuclear or other toxic waste to Hanford

To whom it may concern,

I live in Eugene Oregon and have properties all over Oregon. My livelihood is based on the livability of Oregon. I have great concern that:

1. the transport of nuclear materials and waste along both the I5 and I84 and other highways are will attract a terrorist attack on these transports exposing the populations in WA and OR to nuclear radiation; *110-1*
2. the Columbia River will become further radioactive; *110-2*
3. a leak at Hanford will create radioactive pollution downwind; *110-3*
4. creating more nuclear waste with no methods, means or location to properly reduce its toxicity or permanently store it without risk to present and future generations is foolhardy, irresponsible and unlikely to result in any difference than the present status of the radioactive toxicity currently at Hanford. *110-1 cont'd*

Current health, environmental devastation and degradation and pollution issues at Hanford *should* be remedied *before* any other materials are introduced. And I believe no further nuclear or other toxins should ever be transported to or stored at Hanford. *110-4*

I believe that America's energy future lies not in the creation of new nuclear power plants, despite the Obama administration's recent decision, and instead in true renewable energy sources, such as wind, solar, small hydro, algae-based bio-fuels, tidal and wave power and others.

Please do not allow further and future transport and storage of nuclear materials and waste in the Northwest and specifically at Hanford. *110-1 cont'd*

Sincerely,

Amy
Amy Pincus Merwin
InForm Media and Property
2220 Sandy Drive
Eugene, OR 97401
cp xxx-xxx-xxxx
fx xxx-xxx-xxxx
amy@informproductions.com

110-1 Regarding the commentor's concern about the transport of LLW and MLLW from other DOE sites to Hanford for disposal, DOE will be deferring the decision on sending LLW or MLLW from other DOE sites to Hanford for disposal (with some limited specific exceptions), at least until the WTP is operational, subject to appropriate NEPA review. For a more comprehensive discussion on the transport and disposal of offsite waste, see Section 2.1 of this CRD.

110-2 One of the purposes of this *TC & WM EIS* is to analyze the range of reasonable alternatives to safely retrieve and treat radioactive, hazardous, and mixed waste from the tank systems; close the SST system; and store and/or dispose of the waste generated from these activities at Hanford. DOE acknowledges that long-term actions are required to permanently reduce the risk to human health and the environment posed by the waste in the tank systems.

110-3 Comment noted.

110-4 This *TC & WM EIS* addresses proposed actions to retrieve, treat, and dispose of Hanford tank waste; decommission FFTF; and expand waste disposal capacity at Hanford to provide for disposal of on- and offsite DOE waste. The generation of energy in the United States is beyond the scope of this EIS.

Commentor No. 111: Janice Snyder

From: Janice Snyder [janiceliza@hotmail.com]
Sent: Thursday, March 04, 2010 1:12 AM
To: tc&wmeis@saic.com

Mary Beth Burandt, Document Manager
U.S. Department of Energy, Office of River Protection
P.O. Box 1178, Richland,WA 99352
Fax: 888-785-2865; Email: TC&WMEIS@saic.com

Dear Ms. Burandt,

Please accept these comments on the draft EIS for the US DOE Tank Closure and Waste Management plan.

As a resident of one of the largest cities downriver from Hanford, the fate of radioactive and chemical waste products has a direct impact on me and my community. I am extremely concerned that existing reports have shown that so many of the buried storage tanks have been known to be leaking for so long. I don't understand how a nation with our scientific expertise and willingness to fully fund defense efforts appears unwilling to remedy this alarming situation. *111-1*

I urge the Department of Energy to incorporate the following steps into the final EIS before it is too late:

1. **Clean up all 53 million gallons of buried nuclear waste to 99.9% retrieval.** It seems clear that anything below 99.9% retrieval will lead to elevated drinking water levels of radioactivity. It is not acceptable to knowingly expose citizens to this risk. *111-2*

2. **Drop the proposal to ship radioactive waste from across the nation to Hanford.** DOE's "preferred alternative" is to ship radioactive waste from across the nation to Hanford after the Waste Treatment Plant is operating. No more waste should be shipped to the banks of the Columbia River, the lifeblood of the Pacific Northwest.

   The State of Washington said, "disposal of the proposed offsite waste would significantly increase groundwater impacts to beyond acceptable levels." DOE should exclusively focus on clean up in order to reduce the cancer risks and threats to fish and wildlife posed by existing pollution at Hanford. Because DOE is decades behind its legal schedule in cleaning up existing waste, the proposal to ship more waste to Hanford is beyond foolish. *111-3*

3. **Clean up the millions of gallons of nuclear waste that has already leaked and is reaching the Columbia.** DOE's proposal fails to address important soil and groundwater contamination. DOE should excavate and fully clean miles of ditches and trenches that contain *111-4*

111-1 Both DOE and Congress are committed to the cleanup efforts at Hanford, and DOE continues to seek funding for these efforts. As analyzed in this *TC & WM EIS*, 67 of the 149 SSTs at Hanford are known or suspected to have leaked liquid waste to the environment between the 1950s and the present, some of which has reached the groundwater. Estimates of the total leak loss range from less than 2.8 million to as much as 3.97 million liters (750,000 to 1,050,000 gallons). DOE recognizes that groundwater contamination from past leaks is a concern at Hanford and its potential impact on communities downriver from Hanford. One of the purposes of this *TC & WM EIS* is to analyze potential impacts of DOE's proposed actions to retrieve waste from the buried tanks, treat and dispose of this waste, and close the SST farms. This analysis is also intended to aid DOE in making decisions regarding cleanup of the past leaks.

111-2 The impacts of different levels of tank waste retrieval and of different types of SST system closure are addressed in the *TC & WM EIS* analyses. These include Tank Closure Alternatives 4, 6A, and 6B, which evaluate 99.9 percent retrieval of the tank waste and clean closure of all or part of the SST system. Decisions made by DOE on the proposed actions will be based on a number of factors, including health and safety, environmental, economic, and technical considerations; agency statutory missions; and national policy considerations. The decisions on the selected course of action and supporting rationale will be documented in a ROD issued no sooner than 30 days after the EPA Notice of Availability for this *Final TC & WM EIS* is published in the *Federal Register*.

111-3 Regarding the commentor's concern about the transport of LLW and MLLW from other DOE sites to Hanford for disposal, DOE will be deferring the decision on sending LLW or MLLW from other DOE sites to Hanford for disposal (with some limited specific exceptions), at least until the WTP is operational, subject to appropriate NEPA review. For a more comprehensive discussion on the transport and disposal of offsite waste, see Section 2.1 of this CRD.

The impacts of the offsite waste in terms of radiological risk are presented in the Summary, Section S.5.5.3, and Chapter 2, Section 2.10, Key Environmental Findings. These sections describe the radiological risk differences between including and not including offsite waste disposal at IDF-East.

The *TC & WM EIS* analysis shows that receipt of offsite waste streams that contain specific amounts of certain isotopes, specifically, iodine-129 and technetium-99, could cause an adverse impact on the environment. Therefore, one means of mitigating this impact would be for DOE to limit disposal of

Commentor No. 111 (cont'd): Janice Snyder

waste. In addition, DOE should treat the soil and groundwater beneath the leaky storage tanks. Unchecked, plumes of this contamination are moving toward the river. Complete cleanup is necessary to protect salmon from long-lived radioactive and chemical waste. *111-4 cont'd*

Thank you for your time and attention to these comments,

Janice Snyder
Portland, OR

offsite waste streams at Hanford. Other mitigation measures, such as recycling secondary-waste streams into the primary-waste-stream feeds within the WTP to increase iodine-129 capture in ILAW and bulk vitrification glass, are discussed in Chapter 7, Section 7.5, of this final EIS.

Ecology's foreword to the draft EIS included its views and positions concerning DOE's analysis in the document and has been updated in this final EIS.

111-4 DOE recognizes that groundwater contamination from past leaks is a concern at Hanford and its potential impact on communities downriver from Hanford. One of the purposes of this *TC & WM EIS* is to analyze potential impacts of DOE's proposed actions to retrieve waste from the buried tanks, treat and dispose of this waste, and close the SST farms. This analysis is also intended to aid DOE in making decisions regarding cleanup of the past leaks. The TPA, a legal agreement between DOE, Ecology, and EPA, identifies cleanup actions and schedules, called milestones. The TPA agencies completed negotiations on several Hanford cleanup projects, including the establishment of 29 additional and/or accelerated groundwater and Columbia River protection milestones and target dates.

Commentor No. 112: Gretchen Ellefson

From: Gretchen Ellefson [bellgre@gmail.com]
Sent: Thursday, March 11, 2010 1:02 PM
To: tc&wmeis@saic.com
Subject: Public Comment

I grew up in the Tri-Cities. My father worked at Hanford for years. When I was young, Hanford was just a part of life. Thats not to say that everyone in the Tri-Cities loves nuclear waste and hopes it will be in our water systems for millennia to come, but Hanford drives our economy and makes our area interesting. And for that, we appreciate it.

When I moved to Seattle in the fall of 2008, I found that the attitude of western Washingtonians isnt so different from those in eastern Washington when it comes to waste cleanup. The Tri-Cities may be more pro-nuclear power, but they are not, like some Seattleites seem to believe, pro-pollution and pro-waste. Everyone wants Hanford to be clean. Everyone wants a clean Columbia. So Im not quite sure why the Department of Energy doesnt plan on cleaning up the area as thoroughly as possible. And I dont quite understand how it could seem like a good idea to bring in more waste before Hanford is 100% clean. *112-1*

The Columbia River is hugely influential in the lives of native populations, as well as ecosystems in and around it, not to mention its influence of the livelihoods of thousands who live near the rivers shores. It doesnt make sense that anyone would look at this river and be resigned to the possibility that it could bring death rather than life to plants, animals, and humans who currently rely on it.

I understand it will be difficult. I understand it will be expensive. But which, in the long term, sounds worse: a little more work costing a little more money taking a little more time, or thousands of years of uninhabitable land? I can tell you what I would choose. I cant imagine the beautiful scenery that is the backdrop of so much of my childhood being unlivable, unavailable to future generations as the home it has been for me. *112-2*

112-1 Regarding the commentor's concern about the transport of LLW and MLLW from other DOE sites to Hanford for disposal, DOE will be deferring the decision on sending LLW or MLLW from other DOE sites to Hanford for disposal (with some limited specific exceptions), at least until the WTP is operational, subject to appropriate NEPA review. For a more comprehensive discussion on the transport and disposal of offsite waste, see Section 2.1 of this CRD.

112-2 Comment noted.

Commentor No. 113: Linnea Hirst

From: lwvquilter@comcast.net
Sent: Sunday, March 07, 2010 1:09 PM
To: tc&wmeis@saic.com
Subject: Hanford EIS

To the US Department of Energy
And to the Washington State Department of Ecology
Re: Hanford EIS document: Draft Tank Closure & Waste Management EIS

It is vital that the federal government continue—and accelerate—the thorough cleanup of the Hanford Nuclear Reservation in ways that protect the Columbia River and the people and all living creatures downstream from the Reservation.

We have laws, both federal and state, that must be met in order to protect the environment and the people who live and work in the areas affected by leaking radioactive and chemical wastes. Those wastes cannot be ignored and left to contaminate the land, the groundwater and sooner or later, the Columbia. *113-1*

It is time—beyond time—to pay attention to the generations that will follow us and to leave them an earth that at least is no worse than when we arrived here.

Thank you,

Linnea Hirst
1602 E. McGraw Street
Seattle WA

113-1 In general, the scope of this *TC & WM EIS* does not include groundwater remediation activity as part of the proposed actions evaluated. DOE is implementing an extensive, ongoing cleanup program at Hanford, as required under RCRA, CERCLA, and/or the TPA, a legal agreement between DOE, Ecology, and EPA. The TPA identifies cleanup actions and schedules, called milestones. The TPA agencies completed negotiations on several Hanford cleanup projects, including the establishment of 29 additional and/or accelerated groundwater and Columbia River protection milestones and target dates.

Commentor No. 114: Ken Niles, Assistant Director, Oregon Department of Energy

From: Ken Niles [mailto:ken.niles@state.or.us]
Sent: Wednesday, January 27, 2010 2:33 PM
To: Borak, David
Cc: Hedges, Jane; Jpri461@ECY.WA.GOV
Subject: February 2000 ROD related to disposal of LLW and MLLW

Dave,

As we discussed on the phone, I would appreciate knowing how to initiate a review of the February 25, 2000 Record of Decision that selected Hanford and the Nevada Test Site as "regional" disposal sites for low-level and mixed low-level waste from throughout the DOE complex.

That ROD was based on a programmatic Environmental Impact Statement that did not assess site-specific impacts of that action. That site specific analysis has now been completed, and a draft EIS, the Tank Closure and Waste Management EIS (TC & WM EIS), was released by Hanford late last year. The site-specific analysis shows significant long-term impacts to the Hanford groundwater from the disposal of off-site waste at Hanford, especially if it contains long-lived mobile radionuclides, such as Technetium 99 and Iodine 129.

Even though there is a moratorium in place on receipt of off-site wastes that will extend through 2022, DOE's has previously made it quite clear that it does intend to bring off-site waste to Hanford once that moratorium is no longer in effect. Given the findings in the draft TC&WM EIS, it is clear that the ROD issued in February 2000 designating Hanford for receipt of off-site waste must be amended to withdraw Hanford from that decision.

By doing so, it will allow DOE to move forward with planning for more appropriate disposal of waste streams that will still be in need of a disposal path beyond 2022. It will also allow for a very contentious issue at Hanford to be put to rest once and for all.

Thanks.

Ken Niles
Assistant Director
Oregon Department of Energy
625 Marion Street NE
Salem, OR 97301-3742
503-378-4906
503-884-3905 - cell
503-378-6457 - fax
ken.niles@state.or.us

114-1

114-1 Regarding the commentor's concern about the transport of LLW and MLLW from other DOE sites to Hanford for disposal, DOE will be deferring the decision on sending LLW or MLLW from other DOE sites to Hanford for disposal (with some limited specific exceptions), at least until the WTP is operational, subject to appropriate NEPA review. For a more comprehensive discussion on the transport and disposal of offsite waste, see Section 2.1 of this CRD.

Commentor No. 115: Lucy E. Schneid

From: jlschneid@comcast.net
Sent: Monday, March 08, 2010 1:33 PM
To: tc&wmeis@saic.com
Subject: Hanford Cleanup

Dear Mary Beth Burandt, Document Manager, Office of River Protection

Regarding the Department of Energy's decision to quit treating radioactive waste at Hanford and possible sending additional waste to the site, I need to inform you this is a bad idea. It is a long slog, but Hanford needs to be cleaned up. We cannot leave a nightmare for our children and future generations. We cannot drop the ball here. That is unacceptable. I, like Senator Ron Wyden, am dissatisfied with the cleanup progress, and "I am absolutely opposed to DOE bringing more waste" to this place. Keep the Columbia River a radioactive-free zone forever. This cannot be done without finishing the cleanup job and sealing it from further waste. *115-1* *115-2*

Respectfully yours,

Mrs. Lucy E. Schneid
2334 NE 47th Avenue
Portland, OR 97213

115-1 DOE continues to manage both radioactive waste and MLLW (waste that consists of both radioactive and hazardous components) at Hanford, including processing and/or treating these wastes in accordance with applicable statutory and regulatory requirements. The TPA, negotiated and signed by DOE, EPA, and Ecology in 1989, established Hanford cleanup priorities, actions, and schedules, called milestones. The TPA agencies completed negotiations on several Hanford cleanup projects, including the establishment of 29 additional and/or accelerated groundwater and Columbia River protection milestones and target dates.

115-2 Regarding the commentor's concern about the transport of LLW and MLLW from other DOE sites to Hanford for disposal, DOE will be deferring the decision on sending LLW or MLLW from other DOE sites to Hanford for disposal (with some limited specific exceptions), at least until the WTP is operational, subject to appropriate NEPA review. For a more comprehensive discussion on the transport and disposal of offsite waste, see Section 2.1 of this CRD.

Commentor No. 116: Lucy Garrick

From: Lucy Garrick [lgarrick098@gmail.com]
Sent: Sunday, March 07, 2010 2:17 PM
To: tc&wmeis@saic.com
Subject: PUBLIC COMMENT ON THE DRAFT TANK CLOSURE & WASTE MANAGEMENT ENVIRONMENTAL IMPACT STATEMENT

PUBLIC COMMENT ON THE DRAFT TANK CLOSURE & WASTE MANAGEMENT ENVIRONMENTAL IMPACT STATEMENT

Humans do not mix well with radio active waste and chemical toxins. Neither to plants and animals. As a mother, grandmother and resident of Washington State, I am concerned about the plume maps in the DOE report on the Handford site that show toxins migrating into the ground water and into the Columbia River over time. Once these toxins go into the the river there will be no way to contain them. They will eventually be absorbed into plants which are eaten by fish, which are eaten by mammals and birds. *116-1*

The US DOE needs to use every resource at their disposal to correct this problem by

1) complying with existing laws that regulate the disposal of nuclear waste,
2) not dumping additional waste at the Hanford site from elsewhere,
3) limiting wastes at Hanford to those that won't cause future leakage and migration, and
4) digging up wastes in unlined soil disposal ditches and tank leaks and disposing them in a way that prevents them from spreading or harming the the environment and living things. *116-2*

Lucy Garrick
4119 E Edgewater Pl. G178
Seattle, WA 98112

116-1 In general, the scope of this *TC & WM EIS* does not include (nor will the potential NEPA ROD) groundwater remediation activity as part of the proposed actions evaluated. DOE recognizes that groundwater contamination is a concern at Hanford and its potential impact on communities downriver from Hanford. One of the purposes of this *TC & WM EIS* is to analyze potential impacts of DOE's proposed actions to retrieve waste from the buried tanks, treat and dispose of this waste, and close the SST farms. This analysis is also intended to aid DOE in making decisions regarding cleanup of the past leaks. The TPA, a legal agreement between DOE, Ecology, and EPA, identifies cleanup actions and schedules, called milestones. The TPA agencies completed negotiations on several Hanford cleanup projects, including the establishment of 29 additional and/or accelerated groundwater and Columbia River protection milestones and target dates.

116-2 Responses to each of the commentor's concerns are as follows:

(1) DOE must comply with certain legal requirements to undertake specific activities that are part of the proposed actions and alternatives; these requirements are identified throughout this EIS. For example, Chapter 1, Section 1.2, discusses Hanford regulatory compliance requirements and the WAC regulations DOE must meet for the proposed closure of the SSTs. Section 1.9, which describes the alternatives evaluated in this EIS, refers to the RCRA, WAC, and DOE order requirements that must be met for DOE to implement Tank Closure alternatives. The very nature of "environmental impacts analysis" requires DOE to analyze and describe in this EIS how proposed processes and technologies would operate; what results they are expected to achieve; what end products or byproducts might result; and how these measure up against the legal requirements that apply. Statutory, regulatory, Executive order, and DOE requirements are discussed in the context of each chapter and are listed in the references at the end of each chapter. Chapter 8 identifies and discusses the laws and legal requirements that are potentially applicable to the proposed actions and alternatives, as well as the permits and approvals DOE must obtain from Federal, state, and local agencies. In Chapter 8, Sections 8.1.7 and 8.3, DOE identifies the consultations and coordination that DOE has undertaken with American Indian tribes and that would need to continue for the purpose of implementing the proposed actions and alternatives.

(2) Regarding the commentor's concern about the transport of LLW and MLLW from other DOE sites to Hanford for disposal, DOE will be deferring the decision on sending LLW or MLLW from other DOE sites to Hanford for disposal (with

Commentor No. 116 (cont'd): Lucy Garrick

some limited specific exceptions), at least until the WTP is operational, subject to appropriate NEPA review. For a more comprehensive discussion on the transport and disposal of offsite waste, see Section 2.1 of this CRD.

The impacts of the offsite waste in terms of radiological risk are presented in the Summary, Section S.5.5.3, and Chapter 2, Section 2.10, Key Environmental Findings. These sections describe the radiological risk differences between including and not including offsite waste disposal at IDF-East.

The *TC & WM EIS* analysis shows that receipt of offsite waste streams that contain specific amounts of certain isotopes, specifically, iodine-129 and technetium-99, could cause an adverse impact on the environment. Therefore, one means of mitigating this impact would be for DOE to limit disposal of offsite waste streams at Hanford. Other mitigation measures, such as recycling secondary-waste streams into the primary-waste-stream feeds within the WTP to increase iodine-129 capture in ILAW and bulk vitrification glass, are discussed in Chapter 7, Section 7.5, of this final EIS.

(3) and (4) Since 2004, DOE has buried all LLW in lined trenches. DOE continues to strictly limit the amount of waste Hanford can accept and ensures that disposal activities are protective of the environment and meet regulatory requirements. Regarding the status of groundwater contamination and remediation at Hanford, groundwater remediation activities, as required under RCRA, CERCLA, and/or the TPA, are in various stages of assessment, risk-based end-state development, corrective action, and/or active remediation. For a more comprehensive discussion of remediation at Hanford, see Section 2.3 of this CRD.

Commentor No. 117: Mary Allison

From: Mary Allison [maryallison17@comcast.net]
Sent: Sunday, March 07, 2010 7:01 PM
To: tc&wmeis@saic.com
Subject: Hanford needs a clean-up not a cover-up

I am writing you on behalf of myself and my family to request that you take the necessary action to insure the following:

- Removal of 99.9% of tank wastes currently at the Hanford Reach facility; *117-1*
- Take an unyielding "clean closure" stance to remove all tanks and investigate and remediate the soil contaminations from tank leaks; *117-1*
- Maintain the standard established by Oregon for the Trojan nuclear reactor and treat the waste at Hanford. Do not put radioactive waste on our roads to harm that WILL HARM our adult citizens AS WELL AS our children and seniors. *117-2*
- Discard the "supplemental treatment" options and start up the LAW vitrification portion of the WTP prior to 2019 and start funding a second LAW facility in 2012 in order to have it ready by 2022. *117-3*
- DO NOT ADD MORE WASTE TO HANFORD. I implore you to say no to making Hanford a national radioactive waste dump site. *117-4*
- Dig up Plutonium and other Transuranic wasted in unlined soil disposal ditches and tank leaks, treat the wastes and dispose of them in deep geological repositories. *117-5*

Be the steward that you must be to insure the health of our families and planet.

Mary Allison
xxx-xxx-xxxx

117-1 The impacts of different levels of tank waste retrieval and of different types of SST system closure are addressed in the *TC & WM EIS* analyses. These include Tank Closure Alternatives 4, 6A, and 6B, which evaluate 99.9 percent retrieval of the tank waste and clean closure of all or part of the SST system. Decisions made by DOE on the proposed actions will be based on a number of factors, including health and safety, environmental, economic, and technical considerations; agency statutory missions; and national policy considerations. The decisions on the selected course of action and supporting rationale will be documented in a ROD issued no sooner than 30 days after the EPA Notice of Availability for this *Final TC & WM EIS* is published in the *Federal Register*.

117-2 Chapter 8 of this *TC & WM EIS* identifies the laws, regulations, and other requirements that potentially apply to the alternatives. Specifically, Section 8.1.4 identifies and summarizes the hazardous waste and materials management requirements. This section also discusses the treatment standards and transportation requirements for both hazardous and radioactive materials and waste. Radioactive waste and materials are transported in DOT-certified containers that meet strenuous technical standards established by NRC.

117-3 This EIS analyzed supplemental LAW treatment capability by building new treatment facilities that are either part of (expanded LAW capacity) or separate (bulk vitrification, steam reforming, or cast stone) from the WTP. As discussed in Chapter 2, Section 2.12, DOE does not have a preferred alternative regarding supplemental treatment for LAW. DOE believes it is beneficial to study further the potential cost, safety, and environmental performance of supplemental treatment technologies. DOE is committed to meeting its obligations under the TPA regarding supplemental treatment for LAW.

Appendix E, Section E.1.3.3.1, discusses the DOE Technology Readiness Assessment that included Business Case No. 7 (LAW First and Bulk Vitrification with Tank Farm Pretreatment), i.e., early startup of the LAW treatment process. However, at the time of the *Draft TC & WM EIS* preparation, DOE had not made a decision on whether to support implementation of this business case. Since then, DOE has commissioned an external technical review of the system planning for alternative supplemental treatment of LAW at Hanford (Kosson et al. 2008). The report (Kosson et al. 2008) from this review concluded that, although the current schedule for completion of the WTP LAW Vitrification Facility and supporting facilities could support early treatment of LAW in 2014, such early startup would require an interim pretreatment capability and the means

Commentor No. 117 (cont'd): Mary Allison

for disposition of secondary waste. Since 2008, DOE has been evaluating the transition of the WTP from construction to commissioning. Information on this strategy is provided in Appendix E, Section E.1.3.3.2, of this *Final TC & WM EIS*. The *2020 Vision* (WRPS and BNI 2011) evaluates some of the elements identified in earlier DOE reports, but focuses on commissioning of the WTP project and activities essential to starting up the LAW Vitrification Facility, the Analytical Laboratory, and the BOF, as well as the Pretreatment Facility and the HLW Vitrification Facility. For more information regarding the *2020 Vision,* please see Appendix E, Section E.1.3.3.2.

117-4 Regarding the commentor's concern about the transport of LLW and MLLW from other DOE sites to Hanford for disposal, DOE will be deferring the decision on sending LLW or MLLW from other DOE sites to Hanford for disposal (with some limited specific exceptions), at least until the WTP is operational, subject to appropriate NEPA review. For a more comprehensive discussion on the transport and disposal of offsite waste, see Section 2.1 of this CRD.

117-5 Treatment and disposal of the tank waste is evaluated in this EIS. However, the removal of waste in unlined disposal ditches and stored TRU waste at Hanford is not within the scope of this *TC & WM EIS* and, therefore, is not analyzed in this EIS. As described in the Summary and Chapter 1, Section 1.4.2, Decisions Not to Be Made, these wastes are part of the CERCLA past-practice units and closure of these units would be addressed at a later date consistent with the TPA process, which includes consideration of NEPA values.

The current Administration has established a Blue Ribbon Commission on America's Nuclear Future that has issued a report and recommendations for a path forward for managing the country's HLW. DOE's decisions regarding management of Hanford waste will be consistent with Administration policies. For a more comprehensive discussion of this topic, see Section 2.10 of this CRD.

Commentor No. 118: Tom Pickens

From: Tom Pickens [tsrland@yahoo.com]
Sent: Sunday, March 07, 2010 7:59 PM
To: tc&wmeis@saic.com
Subject: Opposing Hanford site dumping

As a grandfather and father of residents in Washington State, I am concerned about the plume maps in the DOE report on the Hanford site that show toxins migrating into the ground water and into the Columbia River over time. Once these toxins go into the river there will be no way to contain them. They will eventually be absorbed into plants, which are eaten by fish, which are eaten by mammals and birds. *118-1*

The US DOE needs to use every resource at their disposal to correct this problem by

1) complying with existing laws that regulate the disposal of nuclear waste,
2) not dumping additional waste at the Hanford site from elsewhere,
3) limiting wastes at Hanford to those that won't cause future leakage and migration, and
4) digging up wastes in unlined soil disposal ditches and tank leaks and disposing them in a way that prevents them from spreading or harming the environment and living things. *118-2*

Thank you for listening,

Tom Pickens
Danville, CA

118-1 Regarding the status of groundwater contamination and remediation at Hanford, groundwater remediation activities, as required under RCRA, CERCLA, and/or the TPA, are in various stages of assessment, risk-based end-state development, corrective action, and/or active remediation. For a more comprehensive discussion of remediation at Hanford, see Section 2.3 of this CRD.

One of the purposes of this *TC & WM EIS* is to analyze potential impacts of DOE's proposed actions to retrieve waste from the buried tanks, treat and dispose of this waste, and close the SST farms. This analysis is also intended to aid DOE in making decisions regarding cleanup of the past leaks.

118-2 The very nature of "environmental impacts analysis" requires DOE to analyze and describe in this EIS how proposed processes and technologies would operate; what results they are expected to achieve; what end products or byproducts might result; and how these measure up against the legal requirements that apply. Statutory, regulatory, Executive order, and DOE requirements are discussed in the context of each chapter and are listed in the references at the end of each chapter. Chapter 8 identifies and discusses the laws and legal requirements that are potentially applicable to the proposed actions and alternatives, as well as the permits and approvals DOE must obtain from Federal, state, and local agencies.

The *TC & WM EIS* analysis shows that receipt of offsite waste streams that contain specific amounts of certain isotopes, specifically, iodine-129 and technetium-99, could cause an adverse impact on the environment. Therefore, one means of mitigating this impact would be for DOE to limit disposal of offsite waste streams at Hanford. Other mitigation measures, such as recycling secondary-waste streams into the primary-waste-stream feeds within the WTP to increase iodine-129 capture in ILAW and bulk vitrification glass, are discussed in Chapter 7, Section 7.5, of this final EIS.

Commentor No. 119: Mike Conlan

From: Mike Conlan [mikeconlan@hotmail.com]
Sent: Monday, March 08, 2010 2:32 PM
To: tc&wmeis@saic.com
Subject: Comment on Tank Closure & Waste Management Environmental Impact Statement

USDOE:

1) dismantle the FFTF reactor, *119-1*
2) cleanup ALL the tank waste,
3) "clean closure" for all tanks and soils,
4) startup the vitrification as soon as possible, *119-2*
5) no more waste added to Hanford! - a nuclear waste dump within throwing distance of the Columbia River!! *119-3*

USDOE seems more interested in NOT doing the needed cleanup! It is like our disabled vets - easily forgotten - after the fact.

Mike Conlan
6421 139th Place NE, #52
Redmond WA
98052-4588

119-1 DOE issued a ROD (66 FR 7877; January 26, 2001) for the *NI PEIS* (DOE 2000a) wherein DOE announced its decision that FFTF would be permanently deactivated.

The impacts of different levels of tank waste retrieval and of different types of SST system closure are addressed in the *TC & WM EIS* analyses. These include Tank Closure Alternatives 6A and 6B, which evaluate 99.9 percent retrieval of the tank waste and clean closure of all of the SST system, effectively removing 100 percent of the waste. Decisions made by DOE on the proposed actions will be based on a number of factors, including health and safety, environmental, economic, and technical considerations; agency statutory missions; and national policy considerations. The decisions on the selected course of action and supporting rationale will be documented in a ROD issued no sooner than 30 days after the EPA Notice of Availability for this *Final TC & WM EIS* is published in the *Federal Register*.

119-2 As discussed in the *TC & WM EIS* Summary, Chapter 1, and Chapter 2, this EIS analyzes additional waste treatment capability that includes expanding the vitrification process capability currently being constructed in the WTP or supplementing the WTP's capability with supplemental treatment technologies. Thus, decisions to be made by DOE regarding whether to treat all waste in the WTP, as is or expanded, or to supplement its capacity by adding new treatment capability depend on demonstrating the feasibility of supplemental treatment technologies.

119-3 Regarding the commentor's concern about the transport of LLW and MLLW from other DOE sites to Hanford for disposal, DOE will be deferring the decision on sending LLW or MLLW from other DOE sites to Hanford for disposal (with some limited specific exceptions), at least until the WTP is operational, subject to appropriate NEPA review. For a more comprehensive discussion on the transport and disposal of offsite waste, see Section 2.1 of this CRD.

Commentor No. 120: Kristen McNall

From: Kristen McNall [kmcnall@gmail.com]
Sent: Monday, March 08, 2010 5:57 PM
To: tc&wmeis@saic.com
Subject: Clean Up Hanford for Future Generations

Hello,

I have chosen Mosier as my home. The Columbia River is a vital part of our community, both for commerce and for recreation. Were the Columbia to become unusable, our community would suffer, and quite possibly cease to exist. I urge you to clean up Hanford to the best of our abilities to ensure the health of the river for future generations. The goal should be to empty the tanks to the 99.9% or better level, and to address the other sources of contamination rather than just burying them and hoping they won't cause trouble later. Hope can not be our sole strategy for protecting our homeland. *120-1*

Sincerely,

Kristen McNall
Mosier, Oregon

120-1 The impacts of different levels of tank waste retrieval and of different types of SST system closure are addressed in the *TC & WM EIS* analyses. These include Tank Closure Alternatives 4, 6A, and 6B, which evaluate 99.9 percent retrieval of the tank waste and clean closure of all or part of the SST system.

Regarding the status of groundwater contamination and remediation at Hanford, groundwater remediation activities, as required under RCRA, CERCLA, and/or the TPA, are in various stages of assessment, risk-based end-state development, corrective action, and/or active remediation. For a more comprehensive discussion of remediation at Hanford, see Section 2.3 of this CRD.

Decisions made by DOE on the proposed actions will be based on a number of factors, including health and safety, environmental, economic, and technical considerations; agency statutory missions; and national policy considerations. The decisions on the selected course of action and supporting rationale will be documented in a ROD issued no sooner than 30 days after the EPA Notice of Availability for this *Final TC & WM EIS* is published in the *Federal Register*.

Commentor No. 121: Linda Densmore

From: Linda Densmore [densmore@eoni.com]
Sent: Tuesday, March 09, 2010 4:51 PM
To: tc&wmeis@saic.com
Subject: Transportation of nuclear waste to Hanford is a bad idea

Hello- I have lived in La Grande, Oregon for 16 1/2 years and can't believe with all the problems Hanford is having to clean up the nuclear waste that you are willing to bring more there. We also have a home in Hood River and my husband loves to wind surf in the summers. Our kids join and we hope their kids (eventually) will someday too. But they already have a syndrome there I beleive it is called the "sick sinus syndrome" where people who windsurf there end up with a chronic stuffy nose and sometimes sinus infections. When my husband wind surfs other places this doesn't happen. Also La Grande is along hwy 84 and we live in between two of the worst snow passes in the whole U.S. We've already had one spill and we feel we should have a say. There are many families who i visit as a visiting nurse who live right near the freeway. Plus the Tri-Cities area has grown so much over the years...don't you think you should go someplace where there are no people and not a huge source of water that you could further contaminate and interfer with life connected to that river? Please clean up the nuclear waste that is there and then don't bring anymore there. *121-1*

Linda Densmore
7 Pine Crest Drive
La Grande, Oregon
97850
xxx-xxx-xxxx

121-1 Regarding the commentor's concern about the transport of LLW and MLLW from other DOE sites to Hanford for disposal, DOE will be deferring the decision on sending LLW or MLLW from other DOE sites to Hanford for disposal (with some limited specific exceptions), at least until the WTP is operational, subject to appropriate NEPA review. For a more comprehensive discussion on the transport and disposal of offsite waste, see Section 2.1 of this CRD.

Commentor No. 122: John Whisler

From: John Whisler [john.whisler@seattlebiomed.org]
Sent: Tuesday, March 09, 2010 5:59 PM
To: 'TC&WMEIS@saic.com'
Subject: clean up

Please clean up the nuclear waste at Hanford now. *122-1*

Thank you

John Whisler

122-1 Regarding the status of groundwater contamination and remediation at Hanford, groundwater remediation activities, as required under RCRA, CERCLA, and/or the TPA, are in various stages of assessment, risk-based end-state development, corrective action, and/or active remediation. For a more comprehensive discussion of remediation at Hanford, see Section 2.3 of this CRD.

Commentor No. 123: Karen McMichael

From: Lisa Van Dyk [lisa@hoanw.org]
Sent: Tuesday, March 09, 2010 7:32 PM
To: tc&wmeis@saic.com
Subject: Fw: Please forward comments

----- Original Message -----

From: Karen McMichael
To: lisa@hoanw.org
Sent: Tuesday, March 09, 2010 4:40 PM
Subject: Please forward comments

Thanks in advance for forwarding.

Karen:

****

I am deeply concerned about the pending decision to disallow waste materials going to Yucca Mountain. It seems only a matter of time until the waste materials begin leaching into the Columbia river, at which time a crisis would be called and the damage already done. *123-1*

Money has been spent and wasted in the sixty plus years since the Manhattan Project in storing waste. **Please push the Energy Department and our elected officials to honor the commitment made over time to clean up the waste at Hanford! It is dishonorable to current and future generations to perpetuate the health and environmental hazard the waste represents.** *123-2*

Thank you, Karen McMichael,

Karen McMichael 13840 18th Ave. Sw Burien, WA 98166 xxx-xxx-xxxx Home xxx-xxx-xxxx Cell kmcmich@msn.com

123-1 The current Administration has established a Blue Ribbon Commission on America's Nuclear Future that has issued a report and recommendations for a path forward for managing the country's HLW. DOE's decisions regarding management of Hanford waste will be consistent with Administration policies. For a more comprehensive discussion of this topic, see Section 2.10 of this CRD.

This EIS does analyze short-term (minimally 49 years and up to 245 years, depending on the alternative) interim storage of IHLW glass and HLW melters; their storage is predicted to result in no additional risk or environmental hazard to the Hanford area or community. This is because the HLW and HLW melters taken out of service are extremely robust waste forms. In addition, the HLW and selected tank closure debris would be stored in robust interim-storage containers (stainless steel canisters and shielded storage boxes), all of which would be stored in covered, weather-protected facilities until their final disposition path is chosen. Any changes to the disposition path described and analyzed in this *TC & WM EIS* would be subject to appropriate NEPA review.

123-2 Both DOE and Congress are committed to the cleanup efforts at Hanford, and DOE continues to seek funding for these efforts. The TPA, a legal agreement between DOE, Ecology, and EPA, identifies cleanup actions and schedules, called milestones. Negotiations among the TPA agencies resulted in an agreement to make changes to the TPA that (1) reflect the shared priorities of the agencies, tribal nations, stakeholders, and the public to protect the Columbia River by cleaning up the soils and groundwater along the river corridor, and (2) adjust cleanup schedules to focus currently anticipated funds on near-term, higher-priority milestones by delaying cleanup work identified by the agencies as lower priority at this time.

Commentor No. 124: Madya Panfilio

From: Madya [madyapan@yahoo.com]
Sent: Tuesday, March 09, 2010 7:55 PM
To: tc&wmeis@saic.com
Subject: Comments of a Citizen

Just what is it going to take for the citizens of the Northwest to have safe water, if the government agencies that are to protect us completely ignore the urgency of the clean-up of Hanford Waste? Where is the Spirit of America? We must have agencies that want to move forward with the most expedient cleanup.

We need the Disposal of Radioactive & Hazardous Waste to be disposed into lined trenches. *124-1*

Hanford agencies have been given Billions of dollars for clean-up by the citizens of the United States of America. These citizens expect these funds to be used effectively and wisely…..not squandered on frivolous experiments. *124-2*

To abandon the contamination which leaked from the High-Level Nuclear Waste Tanks would be criminal because it is shown to be spreading rapidly towards the Columbia River. *124-3*

I want to see the closure of the SST system and absolutely NO transporting of waste along our highways. *124-4*

Madya Panfilio
Vancouver, WA

124-1 Since 2004, DOE has buried all LLW in lined trenches (see Appendix E, Section E.3.3, for the evolution of past disposal practices). DOE continues to strictly limit the amount of waste Hanford can accept and ensures that disposal activities are protective of the environment and meet regulatory requirements. Previous use of unlined trenches for disposal was a big concern to stakeholders and Washington and Oregon States; DOE heard and addressed those concerns and is using lined trenches.

124-2 The usage of taxpayer dollars in the cleanup of Hanford is beyond the scope of this *TC & WM EIS*.

124-3 DOE recognizes that groundwater contamination from past leaks is a concern at Hanford and its potential impact on communities downriver from Hanford. One of the purposes of this *TC & WM EIS* is to analyze potential impacts of DOE's proposed actions to retrieve waste from the buried tanks, treat and dispose of this waste, and close the SST farms. This analysis is also intended to aid DOE in making decisions regarding cleanup of the past leaks.

124-4 This *TC & WM EIS* addresses proposed actions to retrieve and treat the Hanford tank waste; close the Hanford SST system; store and/or dispose of the waste generated from these tank waste activities; decommission FFTF; and expand or upgrade waste management capabilities to support ongoing and planned waste management activities for on- and offsite waste to facilitate cleanup at Hanford and other DOE sites.

Regarding the commentor's concern about the transport of LLW and MLLW from other DOE sites to Hanford for disposal, DOE will be deferring the decision on sending LLW or MLLW from other DOE sites to Hanford for disposal (with some limited specific exceptions), at least until the WTP is operational, subject to appropriate NEPA review. For a more comprehensive discussion on the transport and disposal of offsite waste, see Section 2.1 of this CRD.

Commentor No. 125: Gerson Robboy

From: Gerson Robboy [uncleyascha@gmail.com]
Sent: Wednesday, March 10, 2010 1:04 AM
To: tc&wmeis@saic.com
Subject: Comment on DOE plans for Hanford

The contamination at Hanford is already a disaster unprecedented in history. If we do not clean up or permanently contain the contamination, we not only hand a huge problem down to our own descendents, but to any possible future civilizations in this area. The existing DOE preferred options are not merely negligent, but criminal. *125-1*

The tank farms must be closed, the soil trenches must be cleaned up or contained, the ground water must be isolated from the Columbia River, regardless of the cost. We must not dump any more waste at Hanford.

Gerson Robboy
uncleyascha@gmail.com
909 NE Brazee St., #11
Portland, OR 97212

125-1 Cleanup of Hanford is a major goal of implementing the Preferred Alternatives presented in this *TC & WM EIS*. The commentor is referred to Chapter 2, Section 2.12, for a discussion of the Preferred Alternatives for tank closure, FFTF decommissioning, and waste management. While implementation of the Preferred Alternatives would go a long way toward achieving cleanup of the site, not all actions related to cleanup are addressed in this *TC & WM EIS*. As stated in Chapter 1, Section 1.4.2, of this EIS, the groundwater contamination in the non-tank-farm areas within the 200 Areas (including the burial grounds, cribs, and trenches [ditches]) is being addressed under CERCLA, which will also satisfy substantive RCRA and Washington State Hazardous Waste Management Act corrective action requirements. Contamination in the vadose zone resulting from tank farm past leaks will be addressed in the SST closure process. The cumulative impacts analysis for this *TC & WM EIS* (see Appendix U and Chapter 6) includes the vadose zone of the 200 Areas in addition to the other areas of Hanford.

Regarding the status of groundwater contamination and remediation at Hanford, groundwater remediation activities, as required under RCRA, CERCLA, and/or the TPA, are in various stages of assessment, risk-based end-state development, corrective action, and/or active remediation. For a more comprehensive discussion of remediation at Hanford, see Section 2.3 of this CRD.

Commentor No. 126: Eric Adman

From: Eric Adman [ericladman@gmail.com]
Sent: Wednesday, March 10, 2010 10:30 AM
To: tc&wmeis@saic.com
Subject: Comments on Hanford Draft Tank Closure and Waste Management Environmental Impact Statement

To whom it may concern - I have the following comments with regard to this document and plan:

I do not support storing more radioactive waste on the Hanford site. Storage and contamination issues with existing waste have yet to be adequately resolved. Waste which is currently stored on site should be stabilized and removed to a more stable deep geologic repository. *126-1*

I do support removing 99.9% of high-level waste from the single-shell tanks, the tanks themselves, and the remediating the contaminated soils. *126-2*

I support vitrification of all of the Low Activity Waste and removal to a deep geologic repository, and increasing vitrification capability to allow this to happen in a shorter time period. *126-3*

Thank you for your attention.

Eric Adman
7815 NE 192 St
Kenmore, WA 98028

126-1 The draft EIS assumed that the IHLW canisters would not be shipped immediately after the IHLW generation. Storage capacity for the IHLW canisters was analyzed as part of the short-term impacts analysis for onsite IHLW interim storage.

Regarding the commentor's concern about the disposition of HLW, the current Administration has established a Blue Ribbon Commission on America's Nuclear Future that has issued a report and recommendations for a path forward for managing the country's HLW. DOE's decisions regarding management of Hanford waste will be consistent with Administration policies. For a more comprehensive discussion of this topic, see Section 2.10 of this CRD.

126-2 The impacts of different levels of tank waste retrieval and of different types of SST system closure are addressed in the *TC & WM EIS* analyses. Tank Closure Alternatives 6A and 6B evaluate 99.9 percent retrieval of the tank waste and clean closure of the SST system. Decisions made by DOE on the proposed actions will be based on a number of factors, including health and safety, environmental, economic, and technical considerations; agency statutory missions; and national policy considerations. The decisions on the selected course of action and supporting rationale will be documented in a ROD issued no sooner than 30 days after the EPA Notice of Availability for this *Final TC & WM EIS* is published in the *Federal Register*.

126-3 As discussed in the Summary, this *TC & WM EIS* analyzes additional waste treatment capability, including expanding the vitrification process capability currently being constructed in the WTP (i.e., constructing a second vitrification plant or supplementing the WTP's capability with supplemental treatment technologies). Thus, decisions to be made by DOE regarding whether to treat all waste in the WTP, as is or expanded, or to supplement its capacity by adding new treatment capability depend on demonstrating the feasibility of supplemental treatment technologies.

See response to comment 126-1 for a discussion of Hanford waste disposal options.

Commentor No. 127: T. J. Mueller, Naval Nuclear Propulsion Program, Naval Sea Systems Command, U.S. Department of Defense

From: Steele, Jeffrey M CIV SEA 08 NR [jeffrey.m.steele@navy.mil]
Sent: Wednesday, March 10, 2010 10:38 AM
To: mary_e_burandt@orp.doe.gov
Cc: tc&wmeis@saic.com
Subject: TC&WMEIS Comment Letter
Attachments: TC-WM Comment Letter.pdf

Ms. Burandt,

Attached is a pdf copy of the Navy comment letter on the TC&WM Draft EIS. It is coming through the regular mail, but I thought I would back up the Post Office by emailing a pdf copy. Thank you.

Jeff Steele
Naval Sea Systems Command
xxx-xxx-xxxx

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Commentor No. 127 (cont'd): T. J. Mueller, Naval Nuclear Propulsion Program, Naval Sea Systems Command, U.S. Department of Defense

DEPARTMENT OF THE NAVY
NAVAL SEA SYSTEMS COMMAND
1333 ISAAC HULL AVE SE
WASHINGTON NAVY YARD DC 20376-0001

08R:JMS:jms
Ser 08R/10-00897
March 5, 2010

Ms. Mary Beth Burandt
Document Manager, TC&WM EIS
DOE Office of River Protection
P.O. Box 1178
Richland WA 99352

This letter provides comments from the Naval Nuclear Propulsion Program on the Draft Environmental Impact Statement on Tank Closure and Waste Management (TC&WM).

In accordance with the Low Level Radioactive Waste Policy Amendments Act of 1985, consistent with two previous Navy Environmental Impact Statements that were both adopted by DOE, and as agreed to by the State of Washington in the *State of Washington v. Bodman* Settlement Agreement, defueled reactor compartments from decommissioned Navy nuclear-powered ships are transported to Hanford for disposal. Reactor compartment disposal is not considered within the scope of the alternatives considered by this Draft EIS, but rather is treated as a separate ongoing action for which the cumulative impacts are evaluated. The enclosed comments are provided to improve the accuracy of the cumulative impact analysis as it pertains to reactor compartment disposal.

The analysis in the Draft TC&WM EIS, in conjunction with the two Navy EISs, clearly demonstrates that Navy reactor compartment disposal at Hanford results in a negligible contribution to long-term Hanford groundwater impacts. The two radionuclides that are most significant in the TC&WM EIS analysis are the long-lived and mobile radionuclides Tc-99 and I-129. The total inventories of Tc-99 and I-129 in all of the Navy reactor compartments are very small - approximately 2.8 curies and less than 0.001 curie respectively. The amounts of these nuclides analyzed in the TC&WM EIS from several other sources, including Hanford tank waste sources, on-site and off-site waste sources, and previous releases to the Hanford environment, exceed the Navy contribution by several orders of magnitude.

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Commentor No. 127 (cont'd): T. J. Mueller, Naval Nuclear Propulsion Program, Naval Sea Systems Command, U.S. Department of Defense

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As demonstrated in the Navy 1996 EIS, the release of these small amounts of long-lived radioactivity from the Navy reactor compartments is very slow, since first the thick reactor compartment hull and packaging must corrode, and then the very slow process of corrosion of highly corrosion-resistant metals must occur. The Navy 1996 EIS analysis calculated that the peak impacts would be very small and well beyond 10,000 years. The TC&WM EIS calculates maximum groundwater impacts within the 10,000 year period, even for waste disposed of in the lined trench of the Hanford Integrated Disposal Facility. This analysis confirms the reasoning behind the lined trench exemption request for Trench 94. The containment provided by the reactor compartments and the inherent containment provided by the metal matrix of corrosion resistant metals result in better long-term environmental protection than a lined trench.

Thank you for the opportunity to review this Draft EIS. The Navy appreciates the assistance of the Department of Energy and the State of Washington in the continued shipment of defueled reactor compartment packages to Hanford.

By direction
T. J. Mueller
Naval Nuclear Propulsion Program

Enclosure: Comments on the TC&WM Draft EIS

Copy to:
M. Collins, DOE-RL
C. Gelles, DOE EM-43
G. Robertson, WDOH

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Commentor No. 127 (cont'd): T. J. Mueller, Naval Nuclear Propulsion Program, Naval Sea Systems Command, U.S. Department of Defense

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Comments on the TC&WM Draft EIS

1. Summary: The Summary and Chapter 1 of the Draft EIS never clearly state whether or not the Navy reactor compartment disposal is within the scope of the proposed action and alternatives for this EIS. In Chapter 6 (Cumulative Impacts) and in Appendix S (Waste Inventories for Cumulative Impact Analysis), the Draft EIS makes it clear that Navy reactor compartment disposal is not within the scope of this EIS, but rather is evaluated along with other past and future actions as part of the cumulative impact analysis. A similar clear statement is needed in the Summary and Chapter 1. *127-1*

2. Chapter 1, Section 1.8: This section lists other past and current NEPA reviews and their relation to the TC&WM EIS. The Navy's 1984 EIS on defueled reactor compartment disposal is listed in this section, but not the 1996 EIS on the same subject that expanded the evaluation to newer ship classes. In addition, the relationship of these EISs to the TC&WM EIS is not discussed. This would be a good location to note that reactor compartment disposal is not within the scope of the TC&WM EIS, but is evaluated in the cumulative impact analysis. *127-2*

3. Chapter 6: On page 6-25, Navy reactor compartment disposal is listed as contributing 1505 person-rem to Hanford Involved Workers. The Navy 1996 EIS does list an estimated occupational dose of 1508 person-rem, but this dose is received by Navy shipyard personnel and not Hanford workers. This should be corrected. *127-3*

4. Appendix S: This appendix lists the waste inventories not associated with the proposed action and alternatives of the TC&WM EIS that are used for the cumulative impacts analysis. The Hanford 218-E-12B burial grounds include both Trench 94, in which the Navy reactor compartments are placed, as well as nearby burial trenches with other Hanford wastes. On page S-95, a single radionuclide inventory is listed for the 218-E-12B burial grounds. It is not possible to tell how much of the listed inventory is attributed to the Navy reactor compartments and how much comes from other Hanford waste. However, even if all of the listed radionuclides were from the Navy reactor compartments, they would not be consistent with the amounts listed in the 1984 and 1996 EISs on reactor compartment disposal. In order to be able to assess the small contribution *127-4*

127-1 Disposition of Navy reactor compartments was added to the list of items in the sections entitled "Decisions Not to Be Made" in the Summary, Section S.1.3.2, and Chapter 1, Section 1.4.2, of this EIS to clarify that the decisions regarding the Navy reactor compartment disposal were addressed in previous NEPA documentation.

127-2 Regarding the inclusion of reactor compartment disposal in the *TC & WM EIS* cumulative impacts analysis, the listing in Chapter 1, Section 1.10, of this final EIS is for purposes of identifying separate but related actions that are either pending or that have been completed. Chapter 6 identifies the actions considered as part of cumulative impacts and specifically mentions the U.S. Navy reactor compartments in Section 6.2.

127-3 The error identified by the commentor was corrected. The dose associated with Navy shipyard work was removed from the presentation of cumulative impacts on Hanford workers.

127-4 In reviewing the information provided by the commentor, DOE was unable to distinguish the stated discrepancies between the inventory reported in Appendix S and those provided in the commentor's letter. The inventory listed in Appendix S for the 218-E-12B burial ground includes both the inventory attributed to the Navy reactor compartments and other Hanford waste previously disposed of, as stated by the commentor. The source for this information is the Hanford Solid Waste Information Tracking System (SWITS), as reported through 2006, not the Navy's 1984 or 1996 EIS, as referenced in the comment. SWITS reports this information as one entry, which cannot be broken out to distinguish trench 94 from the other trenches in this burial ground. SWITS is the most recent and more comprehensive source for waste inventory for the burial grounds; therefore, this EIS uses this reference as its source document. Database updates from the 2006 SWITS are accounted for in the waste projections identified in Chapters 4 and 5 of this *TC & WM EIS* for disposal of waste at Hanford.

Commentor No. 127 (cont'd): T. J. Mueller, Naval Nuclear Propulsion Program, Naval Sea Systems Command, U.S. Department of Defense

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of the Navy reactor compartments to the overall cumulative impacts total, Trench 94 should be separately listed. The following information is provided to assist in such a listing.

a. In a letter dated July 22, 2002, the Navy provided information on the long-lived radionuclide content of Navy reactor compartments as a comment on the Draft Hanford Solid Waste EIS. This information was based not only on the data from the 1984 and 1996 EISs, but also additional Navy reactor compartments beyond those analyzed in these two EISs that could be expected to be disposed of at Hanford through 2046. The total amounts of C-14 and Tc-99 were 499 curies and 2.8 curies respectively. These curie totals would be appropriate for a separate listing of Trench 94 in Appendix S.

b. I-129 was not one of the key radionuclides emphasized in the Draft Hanford Solid Waste EIS, so it was not addressed in the Navy's 2002 comment letter. The amount of I-129 in Navy reactor compartments is very low. Some I-129 is present in activated structural metals as a result of trace uranium impurities in these metals. As discussed on page D-5 of the 1996 Navy EIS, the amount of I-129 in Navy reactor compartments varies from 2E-10 curie to 1.7E-7 curie. Multiplying these values by the total number of reactor compartments, the I-129 in structural metal would be less than 5E-6 curie. Trace amounts of fission product radionuclides are present in the layer of activated corrosion and wear products on the interior surfaces of plant components and piping systems within the reactor compartments. I-129 is not present in sufficient amounts in Navy plants to be measurable in these corrosion and wear products. However, by applying the same scaling factor for I-129 that is used for low level radioactive waste disposal curie calculation, the total amount of I-129 in all of the reactor compartments can be calculated. This would be less than 1E-3 curie for all of the reactor compartments. This amount is greater than the activated structural metal total, so 1E-3 curie would be the appropriate amount to include for I-129 in Trench 94.

c. On page S-148, a lead inventory of 1.06E7 kg is listed for the 218-E-12B burial grounds. It is not clear whether this value is intended to include the Navy reactor compartments or the nearby trenches, or both. Both the 1984 and 1996 Navy EISs state that lead shielding in excess of 100 tons is permanently built into each reactor compartment. Thus, while the 1.06E7 kg

127-4 cont'd

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Commentor No. 127 (cont'd): T. J. Mueller, Naval Nuclear Propulsion Program, Naval Sea Systems Command, U.S. Department of Defense

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value would be appropriate for the 100 reactor compartments evaluated in either the 1984 or 1996 EISs, a value of 3E7 kg would be appropriate for the total number of reactor compartments. The Navy's 1996 EIS included an evaluation of the long term impacts of this shielding lead. Due to the containment provided by the reactor compartment package, the very slow rate of corrosion of lead, and retention in the soil for long periods of time, lead did not result in any significant groundwater contamination for periods well in excess of 10,000 years.

d. On page S-148, a PCB inventory of 1.82E3 kg is listed for the 218-E-12B burial grounds. It is not clear whether this value is intended to include the Navy reactor compartments or the nearby trenches, or both. On page 4-32 of the 1996 Navy EIS, it is noted that older reactor compartments can contain up to about ten pounds of PCBs in solid materials, while newer compartments would contain much less. The 1.82E3 kg value would be a reasonable upper bound for PCBs in Navy reactor compartment packages based on the 10 pounds per reactor compartment value.

e. In the tables of chemical constituents for the various Hanford sites, the column header for chromium is listed as "Chromium (includes hexavalent chromium and chromium from $Na_2Cr_2O_7$)." No value is listed in this column for the 218-E-12B burial grounds (including Trench 94). On page 4-33 of the Navy's 1996 EIS, it is noted that approximately 1 kg of residual potassium chromate corrosion inhibitor is present within each reactor compartment package. Thus, approximately 200 kg of hexavalent chromium could be listed for Navy reactor compartments in Trench 94. The Navy reactor compartments each contain more than one ton of metallic chromium as an alloying element in corrosion resistant metals. The 1996 EIS includes an analysis of the long term corrosion of nickel, which is also present in these corrosion resistant metals, and concluded that due to the containment provided by the reactor compartment package, the very slow rate of corrosion of corrosion resistant metals, and retention in the soil for long periods of time, metals such as nickel and chromium did not result in any significant groundwater contamination for periods well in excess of 10,000 years.

127-4 cont'd

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Commentor No. 128: Gail W. Johnson

From: Gail Johnson [gailahree@yahoo.com]
Sent: Wednesday, March 10, 2010 1:30 PM
To: tc&wmeis@saic.com
Subject: No more waste at Hanford

Rethink Hanford as an option. The location to a major river makes this an especially dangerous choice for all people and wildlife within miles and miles. Until there is some way to decontaminate what already exists we have no right to burden future generations with the responsibility of our toxic waste. *128-1*

Sincerely,

Gail W. Johnson
Portland,Oregon

128-1 Regarding the commentor's concern about the transport of LLW and MLLW from other DOE sites to Hanford for disposal, DOE will be deferring the decision on sending LLW or MLLW from other DOE sites to Hanford for disposal (with some limited specific exceptions), at least until the WTP is operational, subject to appropriate NEPA review. For a more comprehensive discussion on the transport and disposal of offsite waste, see Section 2.1 of this CRD.

This EIS addresses the environmental impacts of retrieval, treatment, and disposal of tank waste and final closure of the SST system. It also evaluates the impacts of FFTF decommissioning, including management of waste generated by the decommissioning process. Finally, this *TC & WM EIS* evaluates the potential environmental impacts of ongoing solid-waste management operations at Hanford, as well as the proposed disposal of Hanford LLW and MLLW and a limited volume of offsite LLW and MLLW.

Commentor No. 129: Jim Minick

From: Jim Minick [jiminick@gorge.net]
Sent: Wednesday, March 10, 2010 1:31 PM
To: tc&wmeis@saic.com
Subject: HANFORD FUTURE COMMENT

Here is my comment concerning the future of Hanford :

As a citizen of Washington State and living within 1 mile of the Columbia here in Klickitat County, I do not want any more hazardous waste being brought to Hanford.

Have extended studies been conducted to see if Hanford should be the new National Radioactive Dump Site? No, they have not. But, by dumping there, it becomes the de facto dump site for the West. That is completely unacceptable. *129-1*

Can we trust that DOE will not allow that to happen ? Of course not. DOE has a terrible track record of lieing and misleading the public and wasting BILLIONS in tax payer money at Hanford. That would be one of the last agencies I would trust. I would not trust DOE to deliver my mail, let alone regulate hazardous waste. They have lost all credibility with me.

Jim Minick
5 Wilkins Dr.
Lyle, Washington
98635

Jim Minick
xxx-xxx-xxxx
jiminick@gorge.net
5 Wilkins Dr.
Lyle, Wa. 98635

129-1 Regarding the commentor's concern about the transport of LLW and MLLW from other DOE sites to Hanford for disposal, DOE will be deferring the decision on sending LLW or MLLW from other DOE sites to Hanford for disposal (with some limited specific exceptions), at least until the WTP is operational, subject to appropriate NEPA review. For a more comprehensive discussion on the transport and disposal of offsite waste, see Section 2.1 of this CRD.

The impacts of the offsite waste in terms of radiological risk are presented in the Summary, Section S.5.5.3, and Chapter 2, Section 2.10, Key Environmental Findings. These sections discuss the radiological risk differences between including and not including offsite waste disposal at IDF-East.

The *TC & WM EIS* analysis shows that receipt of offsite waste streams that contain specific amounts of certain isotopes, specifically, iodine-129 and technetium-99, could cause an adverse impact on the environment. Therefore, one means of mitigating this impact would be for DOE to limit disposal of offsite waste streams at Hanford. Other mitigation measures, such as recycling secondary-waste streams into the primary-waste-stream feeds within the WTP to increase iodine-129 capture in ILAW and bulk vitrification glass, are discussed in Chapter 7, Section 7.5, of this final EIS.

The current Administration has established a Blue Ribbon Commission on America's Nuclear Future that has issued a report and recommendations for a path forward for managing the country's HLW. DOE's decisions regarding management of Hanford waste will be consistent with Administration policies. For a more comprehensive discussion of this topic, see Section 2.10 of this CRD.

Commentor No. 130: Maxine Hines Huber

From: Maxine Huber [maxsprite@hotmail.com]
Sent: Wednesday, March 10, 2010 2:23 PM
To: tc&wmeis@saic.com
Subject: surprise, surprise another comment

Hello Mary Beth,

Maxine Hines Huber here in La Grande with my comments, at least they are usually short. Thanks again to all of you for coming to La Grande, it was the first time in many years. Bet you're worn out. Hope you get lots of emails and then get a rest. So here's my bit.....

If the decision is to leave the dirt under the tank without testing, then one would never know if the contamination was only 10 feet down and easily contained or if it was 70 and hard to deal with. If there is a huge hole, then line it and use it to hold the rest of the waste and contaminated dirt after treatment. So to not look is out of the question. To not act with long term cleanup intentions is not acceptable to me and many more. Retrieve, treat and dispose has been our mantra, capping is an unacceptable short cut. *130-1*

The plant is not a high priority if it's doing no harm and not costing lots to safeguard. Perhaps that could be done with stimulus money when available.

The honesty of the last EIS is impressive but supports the concerns we've all had for years, that it was a more contaminated situation than presented. So, now is the time to make permanent, long term commitments to a thorough cleanup. ARRA money is available, jobs are needed, the new wave of employees and mindset are in support, so are the people and mother nature. Tons of dirt have been moved and more can be, that part is manageable. Momentum and new thinking will come if the intent is set to do thorough cleanup. *130-2*

We are all most effective when body, mind and soul are working together. This is our job and it will work in sync with the earth's fantastic ability to cleanup our messes, we must participate to the fullest extent possible. The short cuts don't work. The contamination will arise again to haunt the fish, water, land, tribes, and the government.

Maxine Hines Huber 701 D Ave. La Grande, Or. 97850 xxx xxx-xxxx

130-1 The impacts of different levels of tank waste retrieval and of different types of SST system closure are addressed in the *TC & WM EIS* analyses. The clean closure alternatives considered for the SST system are represented by the Base and Option Cases of Tank Closure Alternatives 6A and 6B. For both Base Cases, the assumption is that the SST system would be cleaned to levels that would allow for unrestricted use, which would involve removal of the tanks, ancillary equipment, and soils beneath the tanks (contaminated as a result of past leaks) down to the water table. The two Option Cases represent this type of clean closure along with removal of soils beneath the tank farms (contaminated as a result of infiltration from the contiguous cribs and trenches [ditches]). Decisions made by DOE on the proposed actions will be based on a number of factors, including health and safety, environmental, economic, and technical considerations; agency statutory missions; and national policy considerations. The decisions on the selected course of action and supporting rationale will be documented in a ROD issued no sooner than 30 days after the EPA Notice of Availability for this *Final TC & WM EIS* is published in the *Federal Register*.

130-2 Comment noted.

Commentor No. 131: Mary McCracken

From: Mary McCracken [mcmcc@uci.net]
Sent: Wednesday, March 10, 2010 2:33 PM
To: tc&wmeis@saic.com
Subject: Hanford Cleanup

I was demonstrating in MN in the early 60's about nuclear problems. The guys from the Atomic Energy Committee said they were so clever there was no need to worry. I wasn't even that naive THEN. Now I'm just plain cynical. Let the (expletive deleted) seep in the Columbia, haul it in leaky containers, store it in leaky containers. no problem. How about drinking a bit with breakfast while taking your morning vitamins. This country has been RUINED by folks such as yourselves. mary mccracken

131-1

131-1 One of the purposes of this *TC & WM EIS* is to analyze potential impacts of DOE's proposed actions to retrieve waste from the buried tanks, treat and dispose of this waste, and close the SST farms. This analysis is also intended to aid DOE in making decisions regarding cleanup of the site.

Commentor No. 132: Mary McCracken

From: Mary McCracken [mcmcc@uci.net]
Sent: Wednesday, March 10, 2010 3:18 PM
To: tc&wmeis@saic.com
Subject: nice talk

Mary Beth, Max says you are a very nice person. I guess that means I should talk pretty. Is this better?

To Whom It May Concern:

I trust a plan was created to ensure the protection our rivers, soil and children from Hanfords waste sites before they were ever created. I KNOW I can COUNT on my government to protect me! I believe all I've been told in history classes about what motivates the USA. Democracy for all, Peace, Justice, Equal Opportunity, Health Care, Shared wealth and resources. Thus I know we will be protected against toxic chemicals whether manufactured by the government in its pursuit of world dominance or by corporate agriculture in pursuit of profits. *132-1*

In god i trust. mary

132-1 Comment noted.

Commentor No. 133: Richard Mathis

From: richard [bienestar@gocomala.com]
Sent: Wednesday, March 10, 2010 5:02 PM
To: tc&wmeis@saic.com
Subject: Environmental Impact Statement (EIS) for Hanford Nuclear Reservation

I'm amazed that the public is not more informed of the gravity of the conditions at Hanford. The longer we allow leakage to spread, the more hopeless the situation. That we continue to generate waste, and would think to add it to an already bad situation, is unconscionable. I hope you will make clear our situation, and generate support for responsible practices. *133-1*

Sincerely,
Richard Mathis

133-1 The public hearings on the *Draft TC & WM EIS* were intended to inform and educate the public, as well as to collect comments on the draft EIS.

Regarding the status of groundwater contamination and remediation at Hanford, groundwater remediation activities, as required under RCRA, CERCLA, and/or the TPA, are in various stages of assessment, risk-based end-state development, corrective action, and/or active remediation. For a more comprehensive discussion of remediation at Hanford, see Section 2.3 of this CRD.

Commentor No. 134: Brian Bright

From: Brian Bright [bbright123@yahoo.com]
Sent: Wednesday, March 10, 2010 5:02 PM
To: tc&wmeis@saic.com
Cc: lisa@hoanw.org
Subject: Public Comment on the Draft Tank Closure & Waste Management Environmental Impact Statement

My name is Brian Bright and I'm a student a the University of Washington. I want to say that the DOE bureaucracy is committing first degree murder by knowingly transporting nuclear waste through highways, and any deaths in the future caused by the radioactive Columbian. I grew up next to the Columbian, and already it isn't safe to swim there because of pollution. Why are you contributing more to the problem instead of trying to fix it? Dumping waste at the Hanford site is contradictory to what the people need. Bureaucracy was created to serve the people, but what you're doing shows that all the DOE cares about is money and quick solutions. *134-1*

134-1 Regarding the commentor's concern about the transport of LLW and MLLW from other DOE sites to Hanford for disposal, DOE will be deferring the decision on sending LLW or MLLW from other DOE sites to Hanford for disposal (with some limited specific exceptions), at least until the WTP is operational, subject to appropriate NEPA review. For a more comprehensive discussion on the transport and disposal of offsite waste, see Section 2.1 of this CRD.

Monitoring data and potential doses to a variety of receptors are reported annually in the Hanford Site environmental reports (Poston, Duncan, and Dirkes 2011). As presented in Chapter 3, Table 3–13, of this *TC & WM EIS*, the estimated dose from liquid releases from Hanford to the MEI in 2010 was 0.056 millirem.

Commentor No. 135: Gary L. Westerlund

From: Gary Westerlund [gwesterlund@readysetsurf.com]
Sent: Thursday, March 11, 2010 12:18 PM
To: tc&wmeis@saic.com
Subject: Hanford Tank Closure and Waste Management E.I.S.

I'd like to make some comments concerning the Tank Closure and Waste Management E.I.S. for Hanford. Hanford is not a suitable site for long term which means 1000's of years storage of radioactive waste. All tanks with radioactive waste eventually leak and the tanks at Hanford are already leaking. The radioactive contamination is spreading rapidly through the soil to the ground water and Columbia River. Long term storage of radioactive waste should be in a deep geological repository where any leakage cannot reach ground water, lakes or rivers. Thus, Hanford should be cleaned up and shut down. No new waste should be shipped to Hanford. *135-1* *135-2* *135-3*

Since all waste at Hanford should be cleaned up, another Waste Treatment Plant needs to be built as soon as possible so all Low Activity Waste can be vitrified for permanent storage. It is not acceptable to use half-good treatments such as bulk vitrification, cast stone treatment or steam reforming for radioactive waste that will be dangerous for 1000's of years and that could leak into ground water or rivers. *135-4*

The Fast Flux Test Facility should not be entombed in cement ant left at Hanford. It should be removed and the site restored which is the Washington State standard for decommissioning nuclear reactors. *135-5*

Sincerely,

Gary L. Westerlund
9623 S. 205th Pl
Kent, WA 98031
xxx xxx-xxxx

135-1 DOE recognizes that groundwater contamination from past leaks is a concern at Hanford and its potential impact on communities downriver from Hanford. One of the purposes of this *TC & WM EIS* is to analyze potential impacts of DOE's proposed actions to retrieve waste from the buried tanks, treat and dispose of this waste, and close the SST farms. This analysis is also intended to aid DOE in making decisions regarding cleanup of the past leaks. The TPA, a legal agreement between DOE, Ecology, and EPA, identifies cleanup actions and schedules, called milestones. The TPA agencies completed negotiations on several Hanford cleanup projects, including the establishment of 29 additional and/or accelerated groundwater and Columbia River protection milestones and target dates.

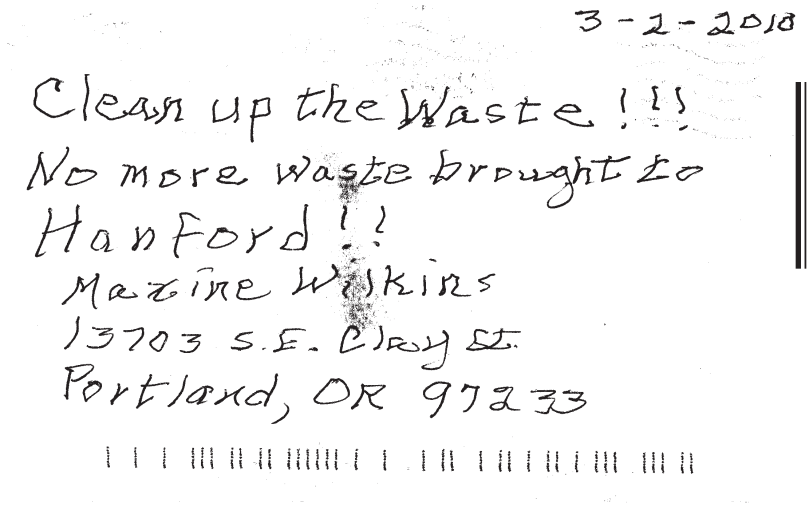
135-2 Regarding the commentor's concern about the disposition of HLW, the current Administration has established a Blue Ribbon Commission on America's Nuclear Future that has issued a report and recommendations for a path forward for managing the country's HLW. DOE's decisions regarding management of Hanford waste will be consistent with Administration policies. For a more comprehensive discussion of this topic, see Section 2.10 of this CRD.

135-3 Regarding the commentor's concern about the transport of LLW and MLLW from other DOE sites to Hanford for disposal, DOE will be deferring the decision on sending LLW or MLLW from other DOE sites to Hanford for disposal (with some limited specific exceptions), at least until the WTP is operational, subject to appropriate NEPA review. For a more comprehensive discussion on the transport and disposal of offsite waste, see Section 2.1 of this CRD.

135-4 As discussed in the *TC & WM EIS* Summary, Chapter 1, and Chapter 2, this EIS analyzes additional waste treatment capability that includes expanding the vitrification process capability currently being constructed in the WTP or supplementing the WTP's capability with supplemental treatment technologies. Thus, decisions to be made by DOE regarding whether to treat all waste in the WTP, as is or expanded, or to supplement its capacity by adding new treatment capability depend on demonstrating the feasibility of supplemental treatment technologies.

135-5 Under NEPA, agencies identify the laws, regulations, and requirements that may apply to the proposed action and alternatives in an EIS and identify where standards may be exceeded. Chapter 8 of this *TC & WM EIS* provides both a listing and short descriptions of the laws, regulations, and requirements that may apply to the proposed actions, including FFTF decommissioning.

Commentor No. 136: Maxine Wilkins



3-2-2010

Clean up the Waste!!!
No more waste brought to
Hanford!!
Maxine Wilkins
13703 S.E. Clay St.
Portland, OR 97233

136-1

136-1 Regarding the status of groundwater contamination and remediation at Hanford, groundwater remediation activities, as required under RCRA, CERCLA, and/or the TPA, are in various stages of assessment, risk-based end-state development, corrective action, and/or active remediation. For a more comprehensive discussion of remediation at Hanford, see Section 2.3 of this CRD.

Commentor No. 137: Frances and Bill Geske

WILLIAM P. GESKE
William P. Geske
716 NE 108
PORTLAND, OR 97220

3/5/10

NO MORE WASTE

CLEAN UP AT

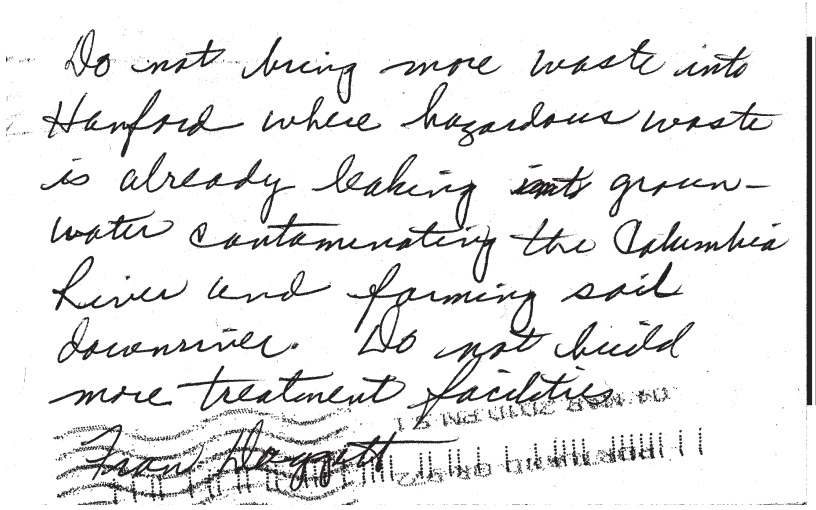
HANFORD.

Frances & Bill Geske
454 NE Lamont Rd.
Portland Oregon 97232

137-1

137-1 Regarding the commentor's concern about the transport of LLW and MLLW from other DOE sites to Hanford for disposal, DOE will be deferring the decision on sending LLW or MLLW from other DOE sites to Hanford for disposal (with some limited specific exceptions), at least until the WTP is operational, subject to appropriate NEPA review. For a more comprehensive discussion on the transport and disposal of offsite waste, see Section 2.1 of this CRD.

Commentor No. 138: Fran Daggett



Do not bring more waste into Hanford where hazardous waste is already leaking into groundwater contaminating the Columbia River and farming said downriver. Do not build more treatment facilities.

Fran Daggett

138-1

138-1 Regarding the status of groundwater contamination and remediation at Hanford, groundwater remediation activities, as required under RCRA, CERCLA, and/or the TPA, are in various stages of assessment, risk-based end-state development, corrective action, and/or active remediation. For a more comprehensive discussion of remediation at Hanford, see Section 2.3 of this CRD.

Commentor No. 139: Roddy M. Daggett

– DO NOT BUILD MORE FACILITIES FOR TREATMENT OF ADDITIONAL TANK WASTE. *139-1*

– DO NOT BRING IN TO HANFORD MORE WASTE *139-2*

– CLOSURE OF SINGLE-SHELL TANK (SST) SYSTEM. LANDFILL CLOSURE EITHER USING CLEAN OR CONTAMINATED SOIL IS NOT ACCEPTABLE. THE COLUMBIA RIVER IS ALREADY IN GREAT JEOPARDY OF CONTAMINATION. *139-3*

Roddy M. Daggett
RODDY M. DAGGETT

139-1 As analyzed in this *TC & WM EIS*, 67 of the 149 SSTs are known or suspected to have leaked. It is likely that some of these tanks continue to leak liquid waste into the subsurface. The construction of the WTP has already commenced and its currently planned configuration includes two HLW and two LAW melters. Treatment of tank waste with this configuration without expanded capacity or supplemental treatment is analyzed under Tank Closure Alternative 2A, where treatment through the WTP would last until 2093. However, under this configuration, construction of a replacement WTP and new DSTs would still be required because the design life of these facilities would be exceeded. Under all action alternatives, either (1) treatment of tank waste would need to be expedited by increasing tank waste treatment capacities (i.e., through WTP expansion and/or constructing supplemental treatment facilities) or (2) construction of replacement facilities to replace those that exceed their design life (i.e., the WTP and/or DSTs) would be required. Without supplemental treatment technologies or expanded WTP capacity, retrieval and treatment of tank waste would take significantly longer to complete, as presented in Chapter 2, Section 2.5.2.

139-2 Regarding the commentor's concern about the transport of LLW and MLLW from other DOE sites to Hanford for disposal, DOE will be deferring the decision on sending LLW or MLLW from other DOE sites to Hanford for disposal (with some limited specific exceptions), at least until the WTP is operational, subject to appropriate NEPA review. For a more comprehensive discussion on the transport and disposal of offsite waste, see Section 2.1 of this CRD.

139-3 The impacts of different types of SST system closure are addressed in the *TC & WM EIS* analyses. These include Tank Closure Alternatives 4, 6A, and 6B, which evaluate 99.9 percent retrieval of the tank waste and clean closure of all or part of the SST system. This closure includes the tank system, along with the vadose zone as impacted by the tank farms (i.e., past leaks). Decisions made by DOE on the proposed actions will be based on a number of factors, including health and safety, environmental, economic, and technical considerations; agency statutory missions; and national policy considerations. The decisions on the selected course of action and supporting rationale will be documented in a ROD issued no sooner than 30 days after the EPA Notice of Availability for this *Final TC & WM EIS* is published in the *Federal Register*.

Regarding the status of groundwater contamination and remediation at Hanford, groundwater remediation activities, as required under RCRA, CERCLA, and/or

Commentor No. 139 (cont'd): Roddy M. Daggett

the TPA, are in various stages of assessment, risk-based end-state development, corrective action, and/or active remediation. For a more comprehensive discussion of remediation at Hanford, see Section 2.3 of this CRD.

Commentor No. 140: Carol Brooke

From: Carol Brooke [carolbrookems@yahoo.com]
Sent: Wednesday, March 10, 2010 5:31 PM
To: tc&wmeis@saic.com
Subject: Toxic Wast Dump Plan

Dear Mr. Gregory H. Friedman,

I just heard that you are planning a toxic waste dump in the Portland, Oregon area. Is this true?

This is unacceptable. Why would we want to destoy this beautiful environment? I am asking that you please stop this. Oregon is not the right place for this. I purposely moved here from an environment with dirty air and rude people. I love Oregon. Please don't send environmental waste here. We are a green state that recycles and cares for our environment.

Please stop this plan.

Thank you,

Carol Brooke

Classroom Crafting with Carol
www.CarolBrookeBooks.com

140-1

140-1 This *TC & WM EIS* does not evaluate waste disposal in the state of Oregon. This EIS analyzes the potential impacts of various Hanford waste management activities on the environment and human health.

Commentor No. 141: Blair Anundson, Consumer and Democracy Advocate, WashPIRG

TANK CLOSURE AND WASTE MANAGEMENT ENVIRONMENTAL IMPACT STATEMENT

U.S. DEPARTMENT OF ENERGY

TC & WM EIS

Comment Form
Formulario para comentarios

Thank you for your input
Gracias por su participación

PLEASE PRINT / FAVOR DE ESCRIBIR CLARAMENTE

Date/Fecha: 03/08/10

1. What comments do you have on the *Draft Tank Closure and Waste Management Environmental Impact Statement for the Hanford Site, Richland, Washington (TC & WM EIS?)*
¿Que comentarios tiene usted sobre el *Borrador de la Declaración Sobre el Impacto Ambiental del Cierre de Contenedores y la Disposición de Desechos del Establecimiento de Hanford, Richland, Washington (TC & WM EIS?)*

***** CONTINUE ON BACK FOR MORE SPACE *****
***** CONTINUAR AL DORSO PARA MÁS ESPACIO *****

Name/Nombre: Blair Anundson, WashPIRG Consumer and Democracy Advocate

Address/Dirección: 1402 3rd Ave, Suite 715

City, State, Zip Code/Ciudad, Estado, Zona Postal: Seattle, WA 98101

NOTE: Please do not include personal information (such as address or phone number) if you object to it being included in the *TC & WM EIS*. Comments received, including contact information, are published in the *TC & WM EIS* in their entirety.
NOTA: Favor de excluir información personal (dirección o número de teléfono) que desea que no aparezcan en el *TC & WM EIS*. Comentarios recibidos, incluyendo la información personal proporcionada, serán publicados en el *TC & WM EIS*.

For more information contact: Mary Beth Burandt, Document Manager,
TC & WM EIS, P.O. Box 1178, Richland, WA 99352
Toll-free Telephone: 1-888-829-6347 • Toll-free Fax: 1-888-785-2865
E-mail: TC&WMEIS@saic.com

Response side of this page intentionally left blank.

Commentor No. 141 (cont'd): Blair Anundson, Consumer and Democracy Advocate, WashPIRG

03/08/10

Hanford Testimony:

My name is Blair Anundson and I'm the Consumer and Democracy Advocate for WashPIRG, the Washington Public Interest Research Group. We're a non-profit, non-partisan public interest advocacy organization with over 18,000 members across the state. WashPIRG favors cleaning up all existing hazardous material at Hanford, investigating the presence and impact of leaks from any of the tanks farms at the site, and prohibiting the importation of additional material until the existing wastes are safely disposed of. *141-1*

This is one of the most heavily polluted sites in the western hemisphere and this pollution presents a growing threat to public health. Contaminated groundwater beneath the site covers an area larger than the city of Seattle, with estimates ranging between eighty and two hundred square miles. Groundwater from the site feeds pollution into the Columbia River, which flows directly along the border of the Hanford Site for more than 50 miles past nine full-scale nuclear reactors and hundreds of liquid waste and burial sites. *141-2*

This flow of hazardous toxins presents a serious risk to the health of people and wildlife below the site and the economy of the region. There are 42 cities and towns downriver from Hanford and businesses in Oregon and Washington along the Columbia create 750,000 jobs, with payrolls totaling $27.5 billion dollars. In Washington alone, farming below Hanford is worth $6.4 billion dollars. And the Columbia River has the single most important salmon run of the entire region. *141-3*

We've waited for over twenty years as the DOE has delayed and under funded cleanup efforts. In 2004, we passed I-937 overwhelmingly. WashPIRG campaigned on that issue and, over the course of four months, we talked to a quarter of a million Washington residents. The sentiment among Democrats, Republican, and Independents was the same: clean up the existing mess before bringing any additional waste into our state. The voters of this state are tired of waiting and they're tired of delays. They want to see action on this issue now and we should pursue policies that reflect their wishes. *141-4*

141-1 As analyzed in this *TC & WM EIS*, 67 of the 149 SSTs at Hanford are known or suspected to have leaked liquid waste to the environment between the 1950s and the present, some of which has reached the groundwater. Estimates of the total leak loss range from less than 2.8 million to as much as 3.97 million liters (750,000 to 1,050,000 gallons). DOE recognizes that groundwater contamination from past leaks is a concern at Hanford. One of the purposes of this *TC & WM EIS* is to analyze potential impacts of DOE's proposed actions to retrieve waste from the buried tanks, treat and dispose of this waste, and close the SST farms. This analysis is also intended to aid DOE in making decisions regarding cleanup of the past leaks.

Regarding the commentor's concern about the transport of LLW and MLLW from other DOE sites to Hanford for disposal, DOE will be deferring the decision on sending LLW or MLLW from other DOE sites to Hanford for disposal (with some limited specific exceptions), at least until the WTP is operational, subject to appropriate NEPA review. For a more comprehensive discussion on the transport and disposal of offsite waste, see Section 2.1 of this CRD.

141-2 Regarding the status of groundwater contamination and remediation at Hanford, groundwater remediation activities, as required under RCRA, CERCLA, and/or the TPA, are in various stages of assessment, risk-based end-state development, corrective action, and/or active remediation. For a more comprehensive discussion of remediation at Hanford, see Section 2.3 of this CRD.

141-3 Relevant data indicate that current Hanford operations do not represent a serious health threat to Columbia River users. Monitoring data and potential doses to a variety of receptors are reported annually in the Hanford Site environmental reports (Poston, Duncan, and Dirkes 2011). As indicated in Chapter 3, Table 3–13, of this *TC & WM EIS*, the estimated dose from liquid releases from Hanford to the MEI in 2010 was 0.056 millirem. The risk of a fatal cancer from this dose is lower than 1 in 35 million.

This EIS analyzes the potential environmental impacts associated with a specific set of proposed actions and reasonable alternatives for the storage, retrieval, treatment, and disposal of tank waste generated from defense plutonium production activities; closure of SSTs containing HLW; decommissioning of FFTF; and continued management of LLW and MLLW at Hanford. Potential long-term impacts are presented in Chapter 5; details of the potential long-term ecological impacts, in Appendix P; and long-term human health impacts, in Appendix Q. Projected impacts will be considered by DOE in making

Commentor No. 141 (cont'd): Blair Anundson, Consumer and Democracy Advocate, WashPIRG

the decisions as discussed in the Summary, Section S.1.3.1, and Chapter 1, Section 1.4.1, Decisions to Be Made.

141-4 In general, the scope of this *TC & WM EIS* does not include groundwater remediation activity as part of the proposed actions evaluated. However, DOE is implementing an extensive, ongoing cleanup program at Hanford, as required under RCRA, CERCLA, and/or the TPA, a legal agreement between DOE, Ecology, and EPA. The TPA identifies cleanup actions and schedules, called milestones. The TPA agencies completed negotiations on several Hanford cleanup projects, including the establishment of 29 additional and/or accelerated groundwater and Columbia River protection milestones and target dates.

See response to comment 141-1 for a discussion on the transport and disposal of offsite waste.

Commentor No. 142: Karina Putri Indrasari

TANK CLOSURE AND WASTE MANAGEMENT ENVIRONMENTAL IMPACT STATEMENT

U. S. DEPARTMENT OF ENERGY

TC & WM EIS

Comment Form
Formulario para comentarios

Thank you for your input
Gracias por su participación

PLEASE PRINT / FAVOR DE ESCRIBIR CLARAMENTE

Date/Fecha: 2/8/2010

1. What comments do you have on the *Draft Tank Closure and Waste Management Environmental Impact Statement for the Hanford Site, Richland, Washington (TC & WM EIS)*?
¿Que comentarios tiene usted sobre el *Borrador de la Declaración Sobre el Impacto Ambiental del Cierre de Contenedores y la Disposición de Desechos del Establecimiento de Hanford, Richland, Washington (TC & WM EIS)*?

Hanford is the most contaminated site on Western hemisphere. I just concern about our future generations if we keep dumping more waste to hanford without cleaning the previous nuclear waste, how can our future generation live healthy or even longer than we are? I have two points to make here. First, just stop dumping more waste to Hanford, ~~and stop~~ second, clean the waste in Hanford and protect our environment.

*** CONTINUE ON BACK FOR MORE SPACE ***
*** CONTINUAR AL DORSO PARA MÁS ESPACIO ***

Name/Nombre: KARINA PUTRI INDRASARI

Address/Dirección: 1810 N 103rd St # 403

City, State, Zip Code/Ciudad, Estado, Zona Postal: Seattle, WA, 98133

NOTE: Please do not include personal information (such as address or phone number) if you object to it being included in the *TC & WM EIS*. Comments received, including contact information, are published in the *TC & WM EIS* in their entirety.
NOTA: Favor de excluir información personal (dirección o número de teléfono) que desea que no aparezcan en el *TC & WM EIS*. Comentarios recibidos, incluyendo la información personal proporcionada, serán publicados en el *TC & WM EIS*.

For more information contact: Mary Beth Burandt, Document Manager,
TC & WM EIS, P.O. Box 1178, Richland, WA 99352
Toll-free Telephone: 1-888-829-6347 • Toll-free Fax: 1-888-785-2865
E-mail: TC&WMEIS@saic.com

142-1

142-1 In general, the scope of this *TC & WM EIS* does not include groundwater remediation activity as part of the proposed actions evaluated. However, DOE is implementing an extensive, ongoing cleanup program at Hanford, as required under RCRA, CERCLA, and/or the TPA, a legal agreement between DOE, Ecology, and EPA. The TPA identifies cleanup actions and schedules, called milestones. The TPA agencies completed negotiations on several Hanford cleanup projects, including the establishment of 29 additional and/or accelerated groundwater and Columbia River protection milestones and target dates.

Regarding the commentor's concern about the transport of LLW and MLLW from other DOE sites to Hanford for disposal, DOE will be deferring the decision on sending LLW or MLLW from other DOE sites to Hanford for disposal (with some limited specific exceptions), at least until the WTP is operational, subject to appropriate NEPA review. For a more comprehensive discussion on the transport and disposal of offsite waste, see Section 2.1 of this CRD.

Commentor No. 143: Janice Faris

Passing on nuclear waste to future generations is cruel. It is our moral responsibility to not create more waste and to treat and dispose of current waste in the safest manner possible. That means on site, not hauling radioactive waste down the freeway to the Idaho National Lab or bringing more to Hanford. We all know the hazards involved with highway travel and with rail travel too. Given the vulnerability of any cargo container that is in motion, one can easily imagine it to be a perfect target for a terrorist or mentally unstable person to say nothing of weather-related accidents or driver error. *143-1*

The DOE's proposal of leaving 1% of the material in the leaking tanks actually means leaving 30% of the most highly radioactive components because the heavy metals settle and accumulate at the bottom. *143-2*

Sorry to say but some of the USDOE's preferred alternatives sound like a true sociopath made them up. I sight: "The USDOE's preferred alternative in the TC & WM EIS is to leave forever the bulk of the contamination from tank leaks and deliberate discharge along with the tanks themselves, under dirt caps instead of cleaning up the contamination" Reference: Heart of America Northwest Research Center *143-3*

Even the USDOE report has acknowledged that "Tank Farm vadose zone work essentially disproved some long-held assumptions that the contamination from the tanks did not migrate and therefore was not a significant environmental risk". This is not news to me as years ago, The Seattle Times documented groundwater contamination going into the Columbia River. *143-4*

So what about the Vitrification Plant? How many years behind and billions of dollars over budget is it? How are the design plans coming? Are there design plans or does it continue to be "design as you go?" Or should it be called "THE FOREVER PROJECT"? *143-5*

We have all feared an insane, sociopathic leader whose finger could ignite a worldwide nuclear war but now we are faced with insane, sociopathic alternatives presented by the DOE which are just as fatal.
"This is the way the world ends
This is the way the world ends
This is the way the world ends
Not with a bang, but a whimper" T.S. Elliot

Check out Helen Caldicott's website and books to learn how radioactive contamination acts on all living cells. Google "depleted uranium and birth defects in Fallujah" to see what uses our spent nuclear wastes have been put to. I think once you are informed you will agree that the use of depleted uranium in munitions should be declared a crime against humanity.

Janice Faris
Renton, WA

143-1 Regarding the commentor's concern about the transport of LLW and MLLW from other DOE sites to Hanford for disposal, DOE will be deferring the decision on sending LLW or MLLW from other DOE sites to Hanford for disposal (with some limited specific exceptions), at least until the WTP is operational, subject to appropriate NEPA review. For a more comprehensive discussion on the transport and disposal of offsite waste, see Section 2.1 of this CRD.

143-2 With regard to the disproportionate amount of radioactivity in the residues at the bottom of the tanks, DOE currently does not have a technical basis for making more-specific assumptions about the expected compositions of the waste "heels" that would remain in the tanks after retrieval. Retrieval has been completed for only a small number of SSTs, and not much is known about the behavior of, or ability to remove, small volumes of residual waste. However, the tank closure process, which includes detailed examinations of the tanks, residual waste, and surrounding waste in the soil, requires preparation of detailed performance assessments and a closure plan. These documents will provide the information and analysis necessary for DOE and the regulators to make specific decisions on what levels of residual tank waste are acceptable in terms of short- and long-term risks. For a more comprehensive discussion of this topic, see Section 2.2 of this CRD.

143-3 The commentor is referred to Chapter 2, Section 2.12, for a discussion of DOE's Preferred Alternatives for tank closure, FFTF decommissioning, and waste management. Regarding the status of groundwater contamination and remediation at Hanford, groundwater remediation activities, as required under RCRA, CERCLA, and/or the TPA, are in various stages of assessment, risk-based end-state development, corrective action, and/or active remediation. For a more comprehensive discussion of remediation at Hanford, see Section 2.3 of this CRD.

One of the purposes of this *TC & WM EIS* is to analyze potential impacts of DOE's proposed actions to retrieve waste from the buried tanks, treat and dispose of this waste, and close the SST farms. This analysis is also intended to aid DOE in making decisions regarding cleanup of the past leaks. Decisions made by DOE on the proposed actions will be based on a number of factors, including health and safety, environmental, economic, and technical considerations; agency statutory missions; and national policy considerations. The decisions on the selected course of action and supporting rationale will be documented in a ROD issued no sooner than 30 days after the EPA Notice of Availability for this *Final TC & WM EIS* is published in the *Federal Register*.

143-4 As analyzed in this *TC & WM EIS*, 67 of the 149 SSTs at Hanford are known or suspected to have leaked liquid waste to the environment between the 1950s and the present, some of which has reached the groundwater. Estimates of the total leak loss range from less than 2.8 million to as much as 3.97 million liters (750,000 to 1,050,000 gallons). DOE recognizes that groundwater contamination from past leaks is a concern at Hanford and its potential impact on communities downriver from Hanford. One of the purposes of this *TC & WM EIS* is to analyze potential impacts of DOE's proposed actions to retrieve waste from the buried tanks, treat and dispose of this waste, and close the SST farms. This analysis is also intended to aid DOE in making decisions regarding cleanup of the past leaks.

143-5 DOE is working diligently to bring the WTP online to treat the tank waste at the site as soon as possible. Chapter 1, Section 1.2, provides a brief history and background on DOE's efforts to reduce costs and speed up Hanford cleanup efforts. As discussed in the *TC & WM EIS* Summary, Chapter 1, and Chapter 2, this EIS analyzes additional waste treatment capability that includes expanding the vitrification process capability currently being constructed in the WTP or supplementing the WTP's capability with supplemental treatment technologies. Thus, decisions to be made by DOE regarding whether to treat all waste in the WTP, as is or expanded, or to supplement its capacity by adding new treatment capability depend on demonstrating the feasibility of supplemental treatment technologies. Therefore, DOE has no plans to build "more than one such plant." As noted in the Summary, Section S.3.1.4, and Chapter 2, Section 2.2.2.2, the WTP is currently being constructed in the 200-East Area of Hanford. Site work associated with the project began in late 2001 and construction is more than 62 percent complete. Details regarding the WTP are provided in Appendix E, including its design and processes, waste-form performance, waste forms/disposal packages, and assumptions and uncertainties.

Commentor No. 144: Angela Samsel

U.S. DEPARTMENT OF ENERGY

Comment Form
Formulario para comentarios

Thank you for your input
Gracias por su participación

PLEASE PRINT / FAVOR DE ESCRIBIR CLARAMENTE

Date/Fecha: 03/08/10

1. What comments do you have on the *Draft Tank Closure and Waste Management Environmental Impact Statement for the Hanford Site, Richland, Washington (TC & WM EIS)*?
¿Que comentarios tiene usted sobre el *Borrador de la Declaración Sobre el Impacto Ambiental del Cierre de Contenedores y la Disposición de Desechos del Establecimiento de Hanford, Richland, Washington (TC & WM EIS)*?

My name is Angela, I am a student at Seattle University and as part of one of my classes I volintaer with the organization Heart of America Northwest, a watch dog group for Hanford, WA. Working for this organization has really opened my eyes to the serious issues with the EIS and the radioactive waste already present in Hanford. I have learned that already over a million gallons of waste have leaked from these tanks contaminating ground water that is flowing towards the Columbia River. I have become very concerned about what this will mean for the future of the Pacific Northwest, the place I call home. I feel that the DOE should be working on cleaning up Hanford using the clean closure standard instead of trying to turn it into a national radioactive waste dump. I believe we need to act responsibly, consciously, and most importantly we need to act now, before the problem gets worse.

** CONTINUE ON BACK FOR MORE SPACE **
** CONTINUAR AL DORSO PARA MÁS ESPACIO **

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NOTE: Please do not include personal information (such as address or phone number) if you object to it being included in the *TC & WM EIS*. Comments received, including contact information, are published in the *TC & WM EIS* in their entirety.
NOTA: Favor de excluir información personal (dirección o número de teléfono) que desea que no aparezcan en el *TC & WM EIS*. Comentarios recibidos, incluyendo la información personal proporcionada, serán publicados en el *TC & WM EIS*.

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144-1

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